ABSTRACT

EDUCATIONAL LEADERSHIP

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THE EFFECTIVENESS OF INSTRUCTIONAL COACHING AND OTHER VARIABLES ON STUDENT ACHIEVEMENT AS PERCEIVED BY TEACHERS: IMPLICATIONS FOR EDUCATIONAL LEADERS

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This study examined instructional coaching and other variables on student achievement as perceived by teachers. The independent variables in the study were teacher efficacy, coaching individual teachers, coaching groups of teachers, instructional strategies, teacher-coach interpersonal relationships and teacher demographics. The dependent variable was student achievement. A quantitative survey was given to all third through fifth grade teachers of students participating in free, academic-based, elementary level classrooms in a large Atlanta metropolitan public school district. The three selected schools were Title I schools with over 85% student eligibility for free or reduced lunch and 92% minority student enrollment. Twenty-eight teachers responded to the coaching questionnaire. The results of the study indicated that there was a statistically significant relationship between teachers receiving individualized professional development and student achievement. A regression analysis found that the most impacting variables on

student achievement in reading were ethnicity, teacher efficacy, individualized professional development and class size. A regression analysis was used to further determine which independent variables had the strongest impact on student achievement in English/language arts. The regression showed that the strongest impacting variables again were ethnicity, teacher efficacy, individualized professional development and class size. Based on the results of the study, it is recommended that the district should provide more individualized professional development in the classroom and additional coaches are needed in order to spend significant amount of time to perform instructional strategies with teachers. To improve teacher efficacy in the classroom, the system needs to strengthen their professional development by providing the kind of instructional strategies that was used in this study. In order to meet the diverse needs of students and increase student achievement, it is recommended that the High Definition Lesson Planning Model and the Observation-Based Instructional Assessment (OBIA) be implemented.

In order for a coaching program to remain effective, district officials and building level administrators need to provide clear, explicit, and consistent support. Finally, this study, showed that interpersonal relationships played a significant role in teacher perceptions of a coaches' effectiveness. Therefore, before hiring a coach the school should seek one that can balance a pleasant disposition with professional expertise.

THE EFFECTIVENESS OF INSTRUCTIONAL COACHING AND OTHER VARIABLES ON STUDENT ACHIEVEMENT AS PERCEIVED BY TEACHERS: IMPLICATIONS FOR EDUCATIONAL LEADERS

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TABLE OF CONTENTS

PAGE

ACKNOWLEDGMENTS ii

LIST OF FIGURES vi

LIST OF TABLES vii

CHAPTER

I. INTRODUCTION 1

Lack of Teacher Methodology 2

Ineffective Professional Development Models 4

Lack of Efficacy 5

Purpose of the Study 9

Statement of the Problem 20

Significance of the Study 20

Limitations 21

II. REVIEW OF THE LITERATURE 23

Academic Achievement 23

Teacher Efficacy 24

Coaching Individual Teachers 27

Coaching Groups of Teachers 28

Teacher-Coach Interpersonal Relationships 29

Administrative-Coaching Interpersonal Relationships 30

District Support 30

Table of Contents (continued)

PAGE

CHAPTER

Instructional Strategies....31

III. THEORETICAL FRAMEWORK....34

Definition of Variables....35

Research Questions....37

IV. RESEARCH METHODOLOGY....39

Introduction....39

Research Design....45

Sample Population....45

Description of Sample Sites....48

Description of Testing of the Instrument....49

Data Collection Procedures....50

Data Analysis....50

V. ANALYSIS OF DATA....51

VI. FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS....65

Findings....66

Conclusions....67

Discussion of Findings....73

Implications....73

Recommendations....79

Summary....81

Table of Contents (continued)

PAGE

APPENDIX

A. Teacher Questionnaire 82

B. Letter of Informed Consent 86

C. Correlations for Variables 87

D. High Definition Lesson Planning Format for Rating 100

E. Observational-Based Instructional Assessment (OBIA) System 103

REFERENCES 105

LIST OF TABLES

PAGE

TABLE

1. 2005-2006 Third Grade CRCT Results 10

2. 2005-2006 Fourth Grade CRCT Results 12

3. 2005-2006 Fifth Grade CRCT Results 15

4. Performance Level on the GPS-Based CRCT for Grades One Through Eight 18

5. Correlations of Reading Student Achievement with Independent Variables 40

6. Predicators of Reading Student Achievement 42

7. Correlations of ELA Student Achievement with Independent Variables 43

8. Predicators of ELA Student Achievement 44

9. School Profile and Demographics—School A 46

10. School Profile and Demographics—School B 45

11. School Profile and Demographics—School C 46

12. Mobility Rates of Student Demographics 47

13. Teacher Attrition Rates 48

14. Grade Level Distribution of Respondents 52

15. Teacher Experience Distribution of Respondents 53

List of Tables (continued)

PAGE

TABLE

16. Certification Level of Respondents 54

17. Education Level of Respondents 54

18. Ethnicity of Respondents 55

19. Gender of Respondents 55

20. Reading Average Statistics on Professional Development 58

21. ELA Average Statistics on Professional Development 59

22. Component Matrix (a) 60

23. Model Summary of Reading Average 63

24. Model Summary of ELA Average 64

LIST OF FIGURES

PAGE

FIGURE

1 . School Organizational Chart 19

2. Theoretical Framework 36

CHAPTER I

INTRODUCTION

Until recently, few educational leaders thought that classroom teachers needed support and professional development at the school site everyday. Instead, they assumed that teachers who graduated from a college and were state certified did not need any additional training to provide effective instruction. However, public education began to change with each passing year and it became apparent that many teachers were not adequately prepared to help all students perform on standard. The No Child Left Behind Act (2001) passed by President Bush mandates in Title 1(section 101), improving the academic achievement of disadvantaged children. Law 107-110, also states in Title 2 (section 201) that we need to have better preparation, training and recruiting of highly qualified teachers in order for students to meet grade level proficiencies by the year 2014. Therefore, with these higher expectations for public education, school districts and school leaders realize that students are less likely to perform at higher levels until teachers start teaching at higher levels.

Some possible reasons for the decline in student achievement are novice teachers and teachers who teach as a second career. These educators may lack appropriate teacher methodology which decreases their efficacy in student learning (Mizell, 2004). Lack of teacher efficacy is also related to teacher attitudes and perceived ability to work with difficult and diverse students. Many teachers feel unprepared to teach students from

culturally diverse backgrounds (Pang & Sablan, 1998). The need for professional development is obvious: many teachers are not prepared for the challenge of educating all students to high levels. District leaders know that the traditional workshops, conferences and courses do not provide the on-going, context-sensitive support that teachers and principals need to improve teaching and learning substantially (Neufeld & Roper, 2003).

Lack of Teacher Methodology

A number of studies found that teachers who enter the profession without being fully prepared are less able to plan and redirect instruction to meet students' needs (Bents & Bents, 1990; Bledsoe, Cox, & Burnham, 1967; Copley, 1974; Grossman, 1989; 1990; Rottenberg & Berliner, 1990). These teachers are also less skilled in implementing instruction, less able to anticipate students' knowledge levels and potential difficulties, and less likely to accept the responsibility to assist students in these areas. Instead, they often blame the students for their unsuccessful teaching methods.

Minority and low-income students in urban settings are most likely to find themselves in classrooms staffed by inadequately prepared, inexperienced, and ill-qualified teachers. This results from inequalities in funding, distributions of local power, labor market conditions, and dysfunctional hiring practices. Far more than any other school factor, teacher quality made the difference in what children learned. Unequal access to well-qualified teachers, a major side effect of unequal expenditures, is one of the most critical factors in the underachievement of African American students (NCTAF, 1997).

These concerns are also reflected in Gomez and Grobe's (1990) study of the performance of alternate route candidates hired with only a few weeks of prior training in Dallas. The performance of these candidates was much more uneven than that of trained beginners, with markedly lower ratings on their knowledge of instructional strategies and instructional models, and with a greater proportion of them (from 2 to 16 times as many) likely to be rated "poor" on each of the training factors evaluated. The proportions rated as "poor" ranged from 8% on reading instruction to 17% on classroom management. The effects of this unevenness showed up most strongly on students' achievement in language arts, where students of the alternate route teachers scored significantly lower than students of fully prepared beginning teachers after adjusting for initial achievement levels.

Ronald Ferguson (1991) found after analyzing a data set covering 900 Texas school districts, that the single most important predictor of increased student learning was teacher expertise (measured by teacher performance on state certification exam, along with teacher experience and Master's degrees). Together these variables accounted for about 40% of the measured variance in student test scores. Holding socioeconomic status constant, the wide variation in teachers' qualifications in Texas accounted for almost all of the variation in black and white students' test scores. That is, after controlling SES, black students' achievement would have been closely comparable to that of whites if they had been assigned equally qualified teachers.

Dorothy Strickland (1985) stresses that good teachers of beginning reading must understand the nature of language and language acquisition as well as the child growth

and development in order to accommodate a variety of cognitive styles and rates. Recent data from the National Assessment of Educational Progress (NAEP, 1994) show that the kinds of classroom practices associated with higher reading scores (use of trade books and literature rather than basal readers and workbooks) were frequently found in classroom teachers with more training in education. Unfortunately, the same report shows that these practices and better-trained teachers are less likely to be available to urban and minority students.

Furthermore, since many of the more expert and experienced teachers transfer to more desirable schools and districts when they are able, new teachers and those without training are typically given assignments in the most disadvantaged schools that offer the fewest supports (Wise, Darling-Hammond, & Berry, 1987; Murnane, Singer, Willet, Kemple, & Olsen 1991). Ineffective teachers confront challenging assignments without mentors or other help, attrition rates for new teachers, especially in cities, average 30% or more over the first five years of teaching (Grissmer & Kirby, 1987; NCES, 1997b; Wise, et al. 1987). This adds additional problems of staff instability to the already difficult circumstances in which central city youth attend school. Where these practices persist, many children in central city schools are taught by a parade of short-term substitute teachers, inexperienced teachers without support, and under-qualified teachers, who know neither their subject matter nor effective teaching methods well.

Ineffective Professional Development Models

Harrison and Killion (2005) reported that professional development is the only practical tool to increase teachers' instructional effectiveness. The researchers also

determined that traditional professional development is not up to this significant challenge. Traditional professional development usually occurs away from the school site; it is also low quality training and is provided only sporadically. This training takes place away from the classroom and misses out on the contexts and challenges teachers experience; therefore, there is very little practical learning for the teacher that can be applied in the classroom.

A school's structure, school climate, or culture may not be conducive to professional learning. The institution may not have the proper structures or schedules to accommodate training. Schools are inclined to shoehorn school-based professional learning by handing it to teachers without deeply understanding what professional learning is or how to incorporate it into the life of the school (Mizell, 2004).

Lack of Efficacy

Teachers exert a potent influence over the achievement of all students, low-income culturally diverse students in particular. For instance, a recent study indicated that teacher involvement had a powerful and direct impact on the academic engagement of African American students (Tucker, Zayco, Herman, Reinke, Trujillo, & Carraway, 2002). Other research suggests that teachers have lower expectations for and fewer interactions with minority children (Garibaldi, 1992; Guerra, Attar, & Weissberg, 1997). These findings have prompted calls for promoting teacher efficacy for working with children from diverse backgrounds (Frey, 2002).

Teachers' sense of efficacy is one of the fewer teacher characteristics consistently related to student achievement. In other words, teachers who believe that student

learning can be influenced by effective teaching despite home and peer influence and who have confidence in their ability to teach persist longer in their teaching efforts, provide greater academic focus in the classroom, give different types of feedback, and ultimately improve student achievement performance (Gibson & Dembo, 1984).

Teacher efficacy also has a relationship with teacher beliefs about difficult-to-teach students and the decisions they make regarding those students. Soodak and Podell (1994) provided teachers with a case study of a difficult student. Teachers were then asked in a free response format to (a) list all the ways the needs of the student might be best met, (b) indicate which suggestions they believed were effective, and (c) state what they believed to be the cause of the student's difficulties. Results indicated that teachers with higher teaching efficacy, or belief in their ability to reach even the most difficult student, were more likely to make teacher-based suggestions to meeting the needs of the student than teachers with low teaching efficacy.

Teachers with low efficacy were more than likely to look for solutions outside of their classroom. This is important because teachers who look to solutions outside of their classroom and who feel the cause is due to external factors are more likely to refer students to special education. Referral to special education and bias in referral decisions have been linked to teacher efficacy (Ashston, 1985).

Teacher efficacy is also related to racial attitudes and perceived ability to work with diverse students. Many teachers feel unprepared to teach students from culturally different backgrounds. In one study, a large group of teachers believed that they could not effectively teach African American students (Pang & Sablan, 1998). Inservice

teachers, in particular, reported lower efficacy for teaching these students, thus indicating the need to offer training to teachers already in the field as well as to preservice teachers.

In light of the known influence of efficacy beliefs on student outcomes, these findings may in part explain the large and persistent gap between school performance of European American students and culturally diverse students, particularly African-American and Hispanic students (National Center for Educational Statistics, 2001). Therefore, efforts to increase teacher efficacy, especially in working with culturally diverse students, are paramount in increasing the low academic achievement and decreasing the disproportionate high school drop out rates among culturally diverse students.

Unfortunately, there are not enough teachers who possess the drive and confidence to try new instructional techniques. For some reason, too many teachers are reluctant learners. They may preach *life-long learning* to their students; however, they do not follow their own advice. This is the fundamental challenge to school-based staff developers: modeling for teachers how a professional educator becomes both an independent and collaborative learner to address instructional challenges more effectively (Mizell, 2004).

A major part of an instructional coach's work is modeling initiatives so that teachers learn how an approach works in their classrooms. Instructional coaches often model the first lesson in a sequence so teachers can better understand how to make the approach work. Teachers need to see it. There is an art to teaching and a lot of that art is

hard to learn from reading teacher manuals (Barnes, 2004). If an intervention works and is easy to implement, studies suggest that teachers will use it.

Instructional coaches provide all the materials teachers need to implement a strategy or routine and to assist teachers in transferring research into practice. Through the use of instructional strategies (e. g., guided reading, analyzing test scores, implementing the writing process, student–conferencing, writing lesson plans, and helping with student discipline) gives teachers the tools they need to cultivate their learning. Coaching is embedded, visible support that is usually funded by the district. Normally, the school district is attempting to respond to student and teacher needs in ongoing, consistent, and dedicated ways. The likelihood of using new learning and sharing responsibility rises when colleagues, guided by the coach, work together and hold each other accountable for improved teaching and learning (Knight, 2004).

An essential feature of coaching is that it uses the relationships between coaches, principals, and teachers to create a conversation that leads to behavioral, pedagogical, and content knowledge change. Effective coaching distributes leadership and supports the goals of effective principals. Coaching can only be accomplished if coaches are focused on teaching and learning. Therefore, the development of leadership skills, professional learning, and support for teachers is encouraged in ways that improve student outcomes (Lyons & Pinnell, 2001).

Research findings also indicate that effective coaching structures promote a collaborative culture. The result is that large numbers of school personnel take ownership and responsibility for leading improvement efforts in teaching and learning.

Coaching attends to the *social infrastructure* issues of schools and systems that often impede the deep and lasting change that school reform requires. These issues include school climate, teacher isolation, insufficient support, and limited instructional and leadership capacity. The attempt to address these critical elements of school quality by incorporating new understandings of effective professional development is a primary reason that coaching holds significant promise toward improving teaching and learning in urban schools (Neufeld & Roper, 2003).

Purpose of the Study

The purpose of this study is to examine teachers' perceptions of instructional coaching and its impact on student achievement. The case study was conducted in three elementary schools in one of the largest metropolitan school districts in Georgia. The results were based upon the elementary schools' Spring 2008 Criterion Reference Competency Test (CRCT) scores. Using CRCT scores from Spring 2004-2006 showed evidence of a disturbing downward spiral in student achievement in grades three through five. Table 1 provides the years, curriculum content and academic achievement levels of third grade students in each of the assigned schools. The table illustrates the 2005-2006 third Grade CRCT results for schools A-C. Table 1 indicates in 2005, on the English/Language Arts portion of the CRCT, school A had 30 students score level 1 which (did not meet standards) increased to 45, with a difference of 15 more students in 2006. A total of 57 students scored at level 2 (met standards) decreased to 52 with a difference of less than 5 students. Finally, school A had 13 students (exceed standards)

Table 1

2005-2006 Third Grade CRCT Results

Schools	Year	Language Arts Levels			Reading Levels		
		1	2	3	1	2	3
School A	2005	30	57	13	17	57	26
	2006	45	49	6	45	52	3
	Diff.	+15	-8	-7	-28	-5	-23
School B	2005	13	69	17	9	39	52
	2006	17	66	17	17	64	19
	Diff.	+4	-3	-0-	+8	+25	-33
School C	2005	37	50	13	18	58	23
	2006	35	59	6	44	52	3
	Diff.	-2	+9	-7	+26	-6	-20

decreased to 6, with a difference of less than 7 students in 2006 (DeKalb County School System, 2006).

The table also shows in 2005, on the Reading portion of the CRCT, school A had 17 level 1 students (did not meet standards) increase to 45, with a difference of 28 more in 2006. A total of 57 students scored at level 2 (met standards) decreased to 52 with a difference of less than 5 students. Finally, school A had 26 students score at level 3 students (exceed standards) decreased to 3, with a difference of less than 23 students in 2006 (DeKalb County School System, 2006).

Table 1 further states that in 2005, on the English/Language Arts portion of the CRCT, school B had 13 students score level 1 (did not meet standards) increase to 17 with a difference of 5 more students in 2006. A total of 69 students scored at level 2 (met standards) decreased to 66, with a difference of less than 3 students. Finally, school B had 17 students score at level 3 (exceeded standards) remained the same as the previous year with a difference of -2 in 2006 (DeKalb County School System, 2006).

Table 1 indicates that in 2005, on the Reading portion of the CRCT, school B had 9 students who scored at level 1 (did not meet standards) increase to 17, with a difference of 8 more students in 2006. A total of 39 students scored at level 2 (met standards) increased to 64, with a difference of 25 more students. Finally, school B had 52 students score at level 3 (exceed standards) decrease to 19, with a difference of less than 33 students in 2006 (DeKalb County School System, 2006).

Table 1 shows in 2005, on the English/Language Arts portion of the CRCT, school C had 37 students score level 1 (did not meet standards) decreased to 35, with a difference of less than 2 students. A total of 50 students scored at level 2 (met standards) increased to 59, with a difference of 9 more students. Finally, school C had 13 students who scored at level 3 (exceed standards) decrease to 6, with a difference of less than 7 students in 2006 (DeKalb County School System, 2006).

The table 1 further states in 2005, on the Reading portion of the CRCT, school C had 18 students score level 1 (did not meet) increased to 44, with a difference of 26 more students in 2006. A total of 58 students scored level 2 (met standards) decreased to 52, with a difference of less than 6 students. Finally, school C had 23 students score level 3

(exceed standards) decreased to 3, with a difference of less than 20 students in 2006 (DeKalb County School System, 2006).

Table 2 illustrates the 2005-2006 Fourth Grade CRCT results for schools A-C. The table indicates in 2005, on the English/Language Arts portion of the CRCT, school A had 23 students score level 1 which (did not meet standards) increased to 34, with a difference of 11 more students in 2006. A total of 67 students scored at level 2 (met standards) decreased to 61 with a difference of less than 6 students. Finally, school A had 10 students (exceed standards) decreased to 5, with a difference of less than 5 students in 2006 (DeKalb County School System, 2006).

Table 2

2005-2006 Fourth Grade CRCT Results

Schools	Year	Language Arts Levels			Reading Levels		
		1	2	3	1	2	3
School A	2005	23	67	10	20	51	29
	2006	34	61	5	35	60	5
	Diff.	+11	-6	-5	+15	+9	-24
School B	2005	19	57	25	16	44	40
	2006	21	62	16	25	54	21
	Diff.	+2	+5	-9	+9	+11	-19
School C	2005	42	49	9	34	48	18
	2006	47	49	5	47	49	5
	Diff.	+5	-0-	-4	+13	+1	-13

Table 2 also shows in 2005, on the Reading portion of the CRCT, school A had 20 level 1 students (did not meet standards) increase to 35, with a difference of 15 more in 2006. A total of 51 students scored at level 2 (met standards) increased to 60 with a difference of more than 9 students. Finally, school A had 29 students score at level 3 students (exceed standards) decreased to 5, with a difference of less than 24 students in 2006 (DeKalb County School System, 2006).

Table 2 further states that in 2005, on the English/Language Arts portion of the CRCT, school B had 19 students score level 1 (did not meet standards) increase to 21 with a difference of 2 more students in 2006. A total of 57 students scored at level 2 (met standards) increased to 62, with a difference of more than 5 students. Finally, school B had 25 students score at level 3 (exceeded standards) decreased to 16 with a difference of less than 9 students in 2006 (DeKalb County School System, 2006).

Table 2 indicates that in 2005, on the Reading portion of the CRCT, school B had 16 students who scored at level 1 (did not meet standards) increase to 25, with a difference of 9 more students in 2006. A total of 44 students scored at level 2 (met standards) increased to 54, with a difference of 11 more students. Finally, school B had 40 students score at level 3 (exceed standards) decrease to 21, with a difference of less than 19 students in 2006 (DeKalb County School System, 2006).

Table 2 shows in 2005, on the English/Language Arts portion of the CRCT, school C had 42 students score level 1 (did not meet standards) increased to 47, with a difference of more than 5 students. A total of 49 students scored at level 2 (met standards) remained the same as the previous year with a difference of -0-. Finally,

school C had 9 students who scored at level 3 (exceed standards) decreased to 5, with a difference of less than 4 students in 2006 (DeKalb County School System, 2006).

The table also indicates in 2005, on the Reading portion of the CRCT, school C had 34 students score level 1 (did not meet) increased to 47, with a difference of 13 more students in 2006. A total of 48 students scored level 2 (met standards) increased to 49, with a difference of more than 1 student. Finally, school C had 18 students score level 3 (exceed standards) decreased to 5, with a difference of less than 13 students in 2006 (DeKalb County School System, 2006).

Table 3 illustrates the 2005-2006 Fifth Grade CRCT results for schools A-C. The table indicates in 2005, on the English/Language Arts portion of the CRCT, school A had 22 students score level 1 which (did not meet standards) increased to 27, with a difference of 5 more students in 2006. A total of 73 students scored at level 2 (met standards) decreased to 68 with a difference of less than 5 students. Finally, school A had 5 students (exceed standards) remain the same as the previous year with a difference of -0- in 2006 (DeKalb County School System, 2006).

The table also shows in 2005, on the Reading portion of the CRCT, school A had 18 level 1 students (did not meet standards) increase to 35, with a difference of 17 more in 2006. A total of 63 students scored at level 2 (met standards) remained the same as the previous year with a difference -0- students. Finally, school A had 18 students score at level 3 students (exceed standards) decreased to 2, with a difference of less than 16 students in 2006 (DeKalb County School System, 2006).

Table 3

2005-2006 Fifth Grade CRCT Results

Schools	Year	Language Arts Levels			Reading Levels		
		1	2	3	1	2	3
School A	2005	22	73	5	18	63	18
	2006	27	68	5	35	63	2
	Diff.	+5	-5	-0-	+17	-0-	-16
School B	2005	14	67	19	10	53	36
	2006	13	74	14	17	75	8
	Diff.	-1	+7	-5	+7	+22	-28
School C	2005	36	49	15	36	57	8
	2006	63	37	0	44	54	2
	Diff.	+27	-12	-15	+8	-3	-6

Table 3 further indicates that in 2005, on the English/Language Arts portion of the CRCT, school B had 14 students score level 1 (did not meet standards) decreased to 13 with a difference of 1 less student in 2006. A total of 67 students scored at level 2 (met standards) increased to 74, with a difference of more than 7students. Finally, school B had 19 students score at level 3 (exceeded standards) decreased to 14 with a difference of less than 5 students in 2006 (DeKalb County School System, 2006).

Table 3 also indicates that in 2005, on the Reading portion of the CRCT, school B had 10 students who scored at level 1 (did not meet standards) increase to 17, with a difference of 7 more students in 2006. A total of 53students scored at level 2 (met

standards) increased to 75, with a difference of 22 more students. Finally, school B had 36 students score at level 3 (exceed standards) decrease to 8, with a difference of less than 28 students in 2006 (DeKalb County School System, 2006).

The table indicates in 2005, on the English/Language Arts portion of the CRCT, school C had 36 students score level 1 (did not meet standards) increased to 63, with a difference of more than 27 students. A total of 49 students scored at level 2 (met standards) decreased to 37, with a difference of less than 12 students. Finally, school C had 15 students who scored at level 3 (exceed standards) decreased to 0, with a difference of less than 15 students in 2006 (DeKalb County School System, 2006).

The table also indicates in 2005, on the Reading portion of the CRCT, school C had 36 students score level 1 (did not meet) increased to 44, with a difference of 8 more students in 2006. A total of 57 students scored level 2 (met standards) decreased to 54, with a difference of less than 3 students. Finally, school C had 8 students score level 3 (exceed standards) decreased to -0-, with a difference of less than 6 students in 2006 (DeKalb County School System, 2006).

The 2005-2006 CRCT results revealed level one student showing a decline in student achievement by increasing in numbers of those that did not meet performance standards. However, level two students did show a significant increase in the number of students meeting standards but at the diminishing result of those students who were level three and exceeding standards. This study seeks to examine if individualized and group coaching increases student achievement in Reading and English/language arts in grades three through five (DeKalb County School System, 2006).

In the past, the state of Georgia used a Quality Core Curriculum (QCC) in all core content areas to measure student performance. In September 2001, an audit of Georgia's QCC was conducted by Phi Delta Kappa at the request of the Georgia State Board of Education. The Phi Delta Kappa audit concluded that, in several areas of the curriculum, the standards lacked rigor and were inadequate to guide teaching effectively. Further, the QCC also could not be covered in a reasonable amount of time; this forced teachers to *guess* that what they were teaching to their students would be on the test. Inevitably, teachers used the curriculum as a reference to mention in lesson plans and then placed it back on the shelf (Georgia Department of Education, 2006).

In response to the No Child Left behind Act (NCLB) signed by President Bush in 2001, Georgia initiated a new K-12 standards-based curriculum called Georgia Performance Standards (GPS). The intent of this new curriculum was to revise, strengthen, and drive both instruction and assessment in Georgia's schools (Georgia Department of Education, 2006). GPS is measured using a statewide assessment called the Criterion Reference Competency Test (CRCT). This assessment indicates whether students are making adequate yearly progress (AYP) in both Reading and English. AYP is a series of annual measurable objectives (AMO) set by the state for each school site and district. The state of Georgia is measured by an AMO percentage of 66.7%, which is a combination of students meeting (Level Two) and exceeding (Level Three) performance standards on the CRCT in grades three through eight.

In order for teachers to be trained on the new standards-based curriculum, and to increase student performance in the classrooms, instructional coaches were hired in an

Atlanta metropolitan school district in 2005 to provide on-site professional development and district-wide training. Therefore, GPS implementation training occurred in two cycles. In 2004-2005, kindergarten through fifth grade teachers received training in English/language arts standards-based instruction; however, they were assessed using QCC's. The following school year, 2005-2006, Reading/ELA Standards were assessed using the new GPS in grades one through eight. AYP is measured in grades three through five at the elementary level (Georgia Department of Education, 2006). Table 4 indicates the performance level on the GPS-based CRCT.

Table 4

Performance Level on the GPS-Based CRCT for Grades One Through Eight

Performance Levels	GPS-Based CRCT Reading, Grades 1-8 and English/Language Arts, Grades 1-8
Scale Score Range	650-950
Did Not Meet the Standard	Below 800
Met the Standard	800-849
Exceeds the Standard	At or Above 850

With the phased-in implementation of the Georgia Performance Standards (GPS), the CRCT now has a scale score that is reported for each content area. Scale scores are developed using various statistical procedures. The process converts the number correct on the test (raw score) to the CRCT scale. Table 4 shows scores that are at or above 850 on GPS-based CRCT indicate a level of performance that *exceeds the standard* set for the

test. Scores from 800-849 for GPS-based CRCT indicate a level of performance that *meets the standard* set for the test. Scores that are 800 on the GPS-based CRCT indicate a level of performance that *does not meet standard* set for the test (Georgia Department of Education, 2006).

Figure 1 provides an illustration of the greater Atlanta school district organization chart. It shows the leadership hierarchy in which district initiatives are communicated to the instructional coach and carried out within the school.

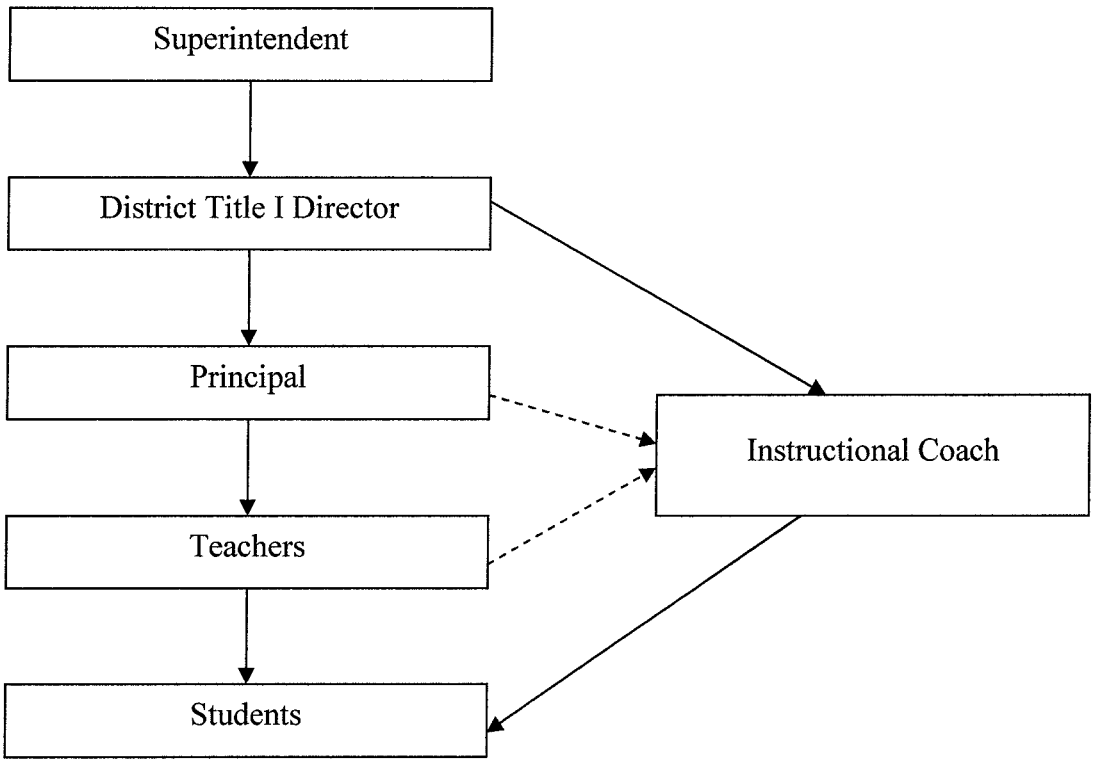

Figure 1. School Organization Chart

Statement of the Problem

This study explores the relationship between individualized coaching and student achievement. It further determines whether there is a difference in student achievement based on individual or group coaching; therefore, the study assumes that teacher self-efficacy can have an effect on student achievement. Accordingly, teacher self-efficacy will also play an important role in this study. Further, it is assumed that the relationships between supervisors and supervisees might influence the willingness of the supervisee to accept suggestions for improvement in instruction; this may also impact student achievement. Finally, the study examines the effects teacher-coach relationships on student achievement.

Significance of the Study

The facilitation of standards-based curriculum and instruction to meet the needs of individual teachers and students is an area of concern in response to high-stakes standards testing. However, little research exists that connects instructional coaching for teachers to student achievement gains (Neufield & Roper, 2003; Poglinco, Bach, Hovde, Rosenblum, Saunders, & Supovitz, 2003). Most qualitative and quantitative studies conducted on the topic measure effectiveness by noting changes in teachers' utilization of new practices or reporting the degree of teacher satisfaction when coaches are available (Edwards & Green, 1999; Godinez, 2003; Hopkins, 2003; Kohler & Crilley, 1997; McLymont & da Costa, 1988; Poglinco et al., 2003).

Some research findings indicate that student achievement does gain ground when teachers assume mutual responsibility for learning (Cushman, 1998; Richard, 2003).

This occurs in coaching situations where dialogue about content and practices are prevalent. Other studies indicate that students are more attentive and involved in school lessons when the teachers have a professional development coach (Sparks & Bruder, 1987). There are few studies that link gains in standardized test scores to the existence of coaching in the impacted schools (Richard, 2003).

This research will also benefit school principals by using the Hershey and Blanchard Situational Theory Model (1969). According to this model, an instructional leader will reap the benefits of having an instructional coach train and work with a novice teacher, as well as experienced teachers, to improve their instructional practices. Coaches (Neufeld & Roper, 2003) can also provide a form of networking and serve as a liaison to share ideas and suggestions from other building level leaders to promote system-wide continuity. An additional asset to maintaining an instructional coach in a district is the convenience of having a trained professional to facilitate parental needs, textbook adoptions, and share experiences at educational conferences. Finally, this study may identify whether certain teachers will benefit from coaching more than others. This will be accomplished by using demographic data from the survey instrument. Additionally, the role interpersonal relationships play in the facilitation of instruction will also be important (Neufeld & Roper, 2003).

Limitations

The researcher acknowledges that there are limitations to this study. Accordingly, three limitations were identified. First, the study is limited to the availability of only one instructional coach. The second limitation is that there are only three schools in a

suburban district; therefore, the results cannot be generalized to other schools. The final limitation is that this study does not include student-related variables, which might affect student achievement, such as parental involvement or low-SES.

CHAPTER II

REVIEW OF THE LITERATURE

The intent of this chapter is to review relevant literature related to academic achievement, the dependent variable in this study. Additionally, literature is also presented that supports the independent variables of this study, which are teacher efficacy, individual professional development, group professional development, and teacher-coach interpersonal relationships. Literature is also presented regarding instructional strategies. Accordingly, the literature review is organized to align with each of the study's variables.

Academic Achievement

Little research exists proving a relationship between utilization of instructional coaching in schools and student achievement gains (Aspen Institute, 2003; Polinco et al, 2003). Most qualitative and quantitative studies done on the issue measure effectiveness, by noting change in teacher utilization of few practices or reporting the degree of teacher satisfaction when coaches are available (Edwards & Green, 1999; Godinez, 2003; Hopkins, 2003: Kohler & Crilley, 1997; McLymont & da Costa, 1988; Polinco et al, 2003) ignoring student outcomes. There are few studies that link gains in standardized test scores to the existence of coaching in the schools impacted (Edna Mconnell Clark Foundation, 2003).

Some research findings indicate that student achievement does gain ground when teachers assume mutual responsibility for learning, as happens in coaching situations where dialogue about content and practices is prevalent (Cushman, 1998; Edna McConnell Clark Foundation, 2003). Other studies indicate that students are more attentive and involved in lessons in schools that have a coaching approach to professional development (Sparks & Bruder, 1987). Further research findings indicated that coaching increased teacher skills, whether the teacher is preservice, low performing or experienced (Burkart, 2004; Morgan & Menlove, 1994 Victoria University, 2002). Increasing instructional capacity of teachers is considered to be a prerequisite to impacting student achievement (Aspen Institute, 2003), giving credence to the contention of many teachers who were coached that student performance improved because they became more skilled (North Central Regional Lab, 2003).

According to Gibson and Dembo (1984), student achievement improved in classrooms where the teachers had more contact. Consequently, student achievement also improved in the classrooms of teachers who possessed greater confidence in the effectiveness of education. Conversely, teachers who heavily rely on school administrator support and less coach involvement produced poorer student achievement results.

Teacher Efficacy

Teacher efficacy measures the extent to which teachers believe their efforts will have a positive effect on student achievement (Gibson & Dembo, 1984). Bandura (1977) made a distinction between expectations about an individual's ability to implement

particular strategies and expectations about the outcomes of those strategies. Further, Gibson and Dembo (1984) frequently used a questionnaire instrument that produced two scores: personal teaching efficacy and general teaching efficacy. The researchers scored personal teacher efficacy on the expectation that the respondent would be able to bring about student learning and general teaching efficacy on the belief that the teachers' ability to bring about change is limited by factors out of their control (Gibson & Dembo, 1984). Teachers who believe that they will make a difference are more likely view coaching as an opportunity to expand their teaching techniques.

Anderson, Greene, and Loewen (1988) used the Gibson and Dembo (1984) instrument in their study. They found that personal teaching efficacy predicted student achievement in language, reading, and math in third grade; however it did not predict student achievement in sixth grade. Conversely, the researchers found that teachers who believe student learning is bombarded by uncontrollable forces tend to regard coaching merely more work (Anderson et al., 1988).

Similarly, a study by McLaughlin and Marsh (1978) found that teachers with strong beliefs in their own effectiveness are more likely to be motivated by high-efficacy teachers who believe instructional improvement is worthwhile. McLaughlin and Marsh (1978) used a single questionnaire item for two dimensions of teacher efficacy: Rand 1 and 2. They found evidence that an extended casual chain existed from teacher efficacy that impacted teacher behavior, which in turn impacted student efficacy, and finally affected student behavior and resulted in student achievement (McLaughlin & Marsh, 1978).

Teacher efficacy also is related to teacher beliefs about difficult-to-teach students and the decisions teachers make regarding these students. Soodak and Podell (1994) provided teachers with a case study of a difficult student. The teachers were asked in a free response format to: (a) list all the ways the student's needs might be best met and (b) indicate what they believed were the causes of the student's difficulties. The study results indicated that teachers with higher personal teaching efficacy were more likely to make teacher-based suggestions to meet the student's needs than teachers with low personal teaching efficacy (Soodak & Powell, 1994). Teachers with low personal teaching efficacy were more likely to look for solutions outside of their own classroom. This is important because teachers who look for solutions outside of their own classrooms, and who believe student problems are cause by external factors, are more likely to refer students to special education (Ashton, 1985).

Finally, teacher efficacy is also related to racial attitudes and the perceived ability to work with diverse student populations. Many teachers believe they are unprepared to teach students from diverse cultures and ethnicities. In one study, a large group of teachers believed that they could not effectively teach African-American students; novice teachers, in particular, reported lower efficacy for teaching African-American students (Pang & Sablan, 1998). The results indicated a need to offer teacher training in their subject fields as well as to preservice teachers. In light of efficacy's known influence on student outcomes, these findings may partially explain the large, persistent gap between the school performance of white students compared with African-American and Latino students (National Center for Education Statistics, 2001).

Efforts to improve teacher efficacy, especially for teachers who work with culturally diverse students, are paramount to increasing academic achievement and reducing the disproportionate high school dropout rates among culturally diverse students. Teachers exert a potent influence over student achievement, especially minority students from low-income families. For example, a recent study concluded that teacher involvement had a powerful and direct impact on the academic engagement of African-American students (Tucker, Zayco, Herman, Reinke, Trujillo, & Carraway, 2002). Other research suggests that teachers have lower expectations for minority students; additionally, they also have fewer interactions with minority students (Garibaldi, 1992; Guerra, Attar, & Weissberg, 1997). These findings prompted calls to promote teacher efficacy for teachers who work with minority students (Frey, 2002).

Coaching Individual Teachers

A body of research exists that indicates that coaching increases teaching skills for preservice, low-performing, and experienced teachers (Burkhart, 2004; Morgan & Menlove, 1994; Victoria University, 2002). Additionally, new teacher retention rates improve in districts with instructional coaches (Griffin, Wohlsetter, & Bharadwaja, 2001). The reason for this is that the level of support for the novice can be personalized to their needs and is non-evaluative in nature (Griffin et al., 2001).

An instructional coach can either schedule a series of one-on-one or small group meetings to identify what topics teachers are interested in learning about and to discuss how that research can be translated into practice. School culture is often opposed to change initiatives; however, every school has teachers who are interested in new ideas.

Coaches work from the assumption that knowledge is quickly absorbed when it is learned on the job. Instructional coaches model teaching strategies, give ideas, and provide resources to teachers during one-on-one meetings (Knight, 2004).

Teachers can meet with instructional coaches anywhere—from once or twice to every week for a semester—depending on the nature of the strategy being introduced. Most teachers meet with coaches on teacher planning days. Each meeting focuses on real applications of the research-based interventions; theoretical discussion is kept to a minimum, at least initially. For example, a coach and teacher may discuss how to organize a unit and develop a graphic organizer so that the teacher can use it right away (Knight, 2004).

Coaching Groups of Teachers

Group coaching requires more time than a single meeting and it cannot be delineated in an agenda. Ideally, groups should be small, consisting of no more than 10 to 12 people. Group coaching offers an opportunity to accelerate learning through the synergy of shared knowledge and experience in a learning community. Knight (2004) reported that instructional coaches begin the change process by meeting with each school department, or team. Then instructional coach collaborates with teachers on new research-validated instructional practices in the classroom designed to increase their teacher methodology.

Then, the instructional coach asks teachers to indicate their level of interest on an evaluation form. The coach serves as a liaison between teachers and administrators and between the school and the district; additionally Knight (2004) further states that coaches

act as process facilitators and content experts—typically in math or literacy. Ideally, coaches are viewed as colleagues and allies rather than evaluators or administrators.

Teacher-Coach Interpersonal Relationships

Teachers who develop a relationship with an instructional coach, generally assume greater responsibility for and control over their own professional growth, are willing to share methodology and resources, and consider themselves more effective that teachers lacking contact with a coach (McCourt, 2000). It is important to communicate and establish trust with teachers who are trying to change their practice methods. Additionally, coaches must be sensitive to teachers' dilemmas, fears, and celebrations. Coaches must also be able to observe accurately and provide teachers with appropriate feedback about their practice in a respectful and collaborative manner. Further, coaches must balance advocating for teachers while also working with administrators to advance goals and the school's learning community (Aspen Institute, 2003).

A key to coaching relationships is building rapport and confidentiality with teachers (North Central Regional Education Lab, 2003). Without confidentiality, the relationship will not support the changes teachers are attempting. In such an environment, teachers need to believe they are safe in making mistakes, can experiment without fear of reprisal, and understand that innovation is encouraged and supported. Teachers are much more likely to listen to and respect the coach's suggestions and advice when they know that the coach is nonjudgmental. A nonjudgmental attitude is the foundation for building trust and creating a safe environment.

It is not possible for every coach to build a deep, personal relationship with every teacher. However, it is mandatory that coaches and teachers have a strong foundation based on professionalism and mutual respect for one another. Rapport takes time to build; and, in some situations, it takes longer to achieve in some situations than in others (Knight, 2004).

Administrative-Coaching Interpersonal Relationships

Instructional coaches typically work with teams of teachers in one to three schools at a time. Coaches are more effective if they have the supportive backing of school administrators. In particular, principals increase a coach's effectiveness when they collaborate with the coach to identify the teachers who would most benefit from the coach's services. Additionally, principals can apply pressure to teachers who need improvement, lead school improvement teams to institutionalize the interventions provided by coaches, and evaluate teachers' experiences. Further, principals are more effective in supporting coaches when they know that the coach's efforts are important to the school district's decision-makers; many principals are hesitant to fully support a coach's efforts unless they have district support (Knight, 2004).

District Support

Instruction is most visible at the school level in the interactions between teachers and students; however, in order for coaching to be effective, it must permeate all levels of the district. The process of embedding instructional coaching in a district's larger professional development system allows stakeholders to engage in learning and to appropriately allocate resources. Ideally, coaches are members of a district-wide team

that seeks to improve teachers' practices. Insufficient support, or commitment, from the district's leadership can derail even the best-laid plans; therefore, it is important that district personnel support and align the work across the district, community-based, and other organizations that are knowledgeable about particular content-based issues (Knight, 2004).

Instructional Strategies

Coaches must have a deep understanding of subject matter, including how knowledge of a discipline is developed through curricula and learning materials (Feger et al., 2004). Coaches with experience at the elementary school level indicate that a certain level of content-area expertise is necessary to be a subject-area coach. It is critical that coaches understand how children learn and possess a deep knowledge of the tasks, questioning strategies, and classroom structures that can help students develop ideas. Further, coaches must have specific knowledge of professional development materials, literature, and resources that support teacher development of subject or pedagogical knowledge or help teachers better understand how to teach for comprehension.

Coaches must be proficient in coaching strategies and structures, such as how to use pre- and post-conferences, the role of questioning strategies, planning lessons and how to utilize teaching artifacts. A coach may plan a lesson with a teacher, co-teach, conduct classroom observations, model effective strategies, or create a transcript of a class discussion to review with the teacher in a post-lesson meeting. Two coaching strategies that sparked the most interest for teachers were questioning and demonstrating lessons (Feger, Hickman, & Woleck, 2004).

Effective demonstration lessons can establish an active role for the teacher as an observer (Feger et al., 2004). The observations occur through reflective questioning, note taking during the lesson, or designating a student for the teacher to observe. This puts the teacher in the role of researcher and provides the teacher with material that can serve as a springboard for discussion about specific aspects of the lesson during coaching sessions.

Another useful instructional strategy is co-teaching. In co-teaching, the teacher leads the lesson alongside the coach. The coach and teacher meet prior to the lesson to plan on focusing student learning goals, which questions and materials best support these goals, and which aspect of the lesson the teacher would most like feedback. The coach provides as little, or as much, support as needed to the teacher during the lesson. It may be necessary to model questioning techniques during class discussion or ask the teacher to shadow the coach as they listen to student responses in small-group discussions (Feger et al., 2004).

Increasing the instructional capacity of teachers is considered to be a prerequisite to impacting student achievement (Neufield & Roper, 2003). It gives credence to the belief that teachers who receive instructional coaching improve student performance by their increased teaching skills (North Central Educational Regional Laboratory, 2003). Seeking to improve instructional practices and, ultimately, student learning, districts across the country have embraced an old idea and given it a new application. Taking their cue from athletics, where coaches have enabled football and tennis players to succeed by helping them strengthen skills before game time, districts have adopted coaching as a model for the professional development of teachers and principals. The

goal is to engage educators in collaborative work designed to contribute to the development of intellectual capacity (Neufeld & Roper, 2003).

Coaching is a natural outgrowth of lessons cognitive psychology has taught us about what it means to learn and know something. Neufeld and Roper (2003) found that student learning includes much more than remembering and repeating what the teacher has said; it also includes the capacity to use what has learned in traditional and novel ways, the capacity to make connections between new knowledge and old. To accomplish learning of this sort, schools must provide students with opportunities to solve problems and come to understand academic content in more complex ways.

Student learning casts teachers as guides or coaches who facilitate learning by posing questions, challenging students' thinking, and leading them in examining ideas and relationships. These activities are considered essential because, they write, what students learn has to do fundamentally with how they learn it (Cohen et al. 1993). The implications of these for schools and teachers are significant. Schools and classrooms need to become places in which children and teachers challenge each other about facts as well as opinions, places in which students approach academic content through assignments that involve problem solving, critical analysis, or higher-order thinking. Teaching that includes all of these components is known as teaching for understanding (Cohen et al. 1993). It is a fundamental part of standards-based reform and central to many of the latest approaches to teaching reading, writing mathematics and science.

CHAPTER III

THEORETICAL FRAMEWORK

Recent research by Fullan (1993), Killion (2002), and Robb (2000) regarding use of instructional coaches as a school improvement tool have indicated that the goal is to establish better professional development models within the school in which teachers learn by watching effective models, reflecting collaboratively on teaching practices, getting feedback on new strategies learned and by focusing on student work.

Instructional coaches are effective leaders in these types of isolated breaking activities when they are well versed in adult learning theory (Bowman & McCormick, 2002). This theoretical framework perspective is reflected in the data collection and interpretation phases of the study. The district under study has allocated funds to train instructional coaches in best practice teaching strategies that are apart of district initiatives. Instructional coaches specifically work with teachers collaboratively to improve instructional practices and strategies dealing with guided reading, differentiating instruction, process of writing and analyzing student work.

The researcher's position as an instructional coach is to observe, model and provide an instructional prescription that meets the needs of coaching individual teachers in addition to coaching grade level groups. The researcher may provide additional support to a heterogeneous (from various grade levels) group of teachers to focus on a

specific content area or homogenous (same grade level) group for age appropriate subject matter (Knight, 2004).

The theoretical framework of this study focuses on the independent variables, which include teacher efficacy, individual staff development, group staff development and teacher-coach interpersonal relationships in the perception of teachers and how they may be related to the dependent variable on student academic achievement. The assumption is that the teacher perceptions of how they believe a coach is effective to their instructional practice will assist schools leaders by providing quality professional development programs that will benefit low-income and minority children. Figure 2 illustrates the theoretical framework of this study.

Definition of Variables

Dependent Variable

Academic Achievement: In this study, academic, or student achievement is defined as a student's work performance based upon the Criterion Reference Competency Test (CRCT) in Reading and English Language Arts.

Independent Variables

Personal Teacher Efficacy: In this study, teacher efficacy entails a teacher possessing the confidence to carry out new instructional strategies being modeled by a coach (differentiation during guided reading, lesson planning for diverse student needs, analyzing student work collaboratively).

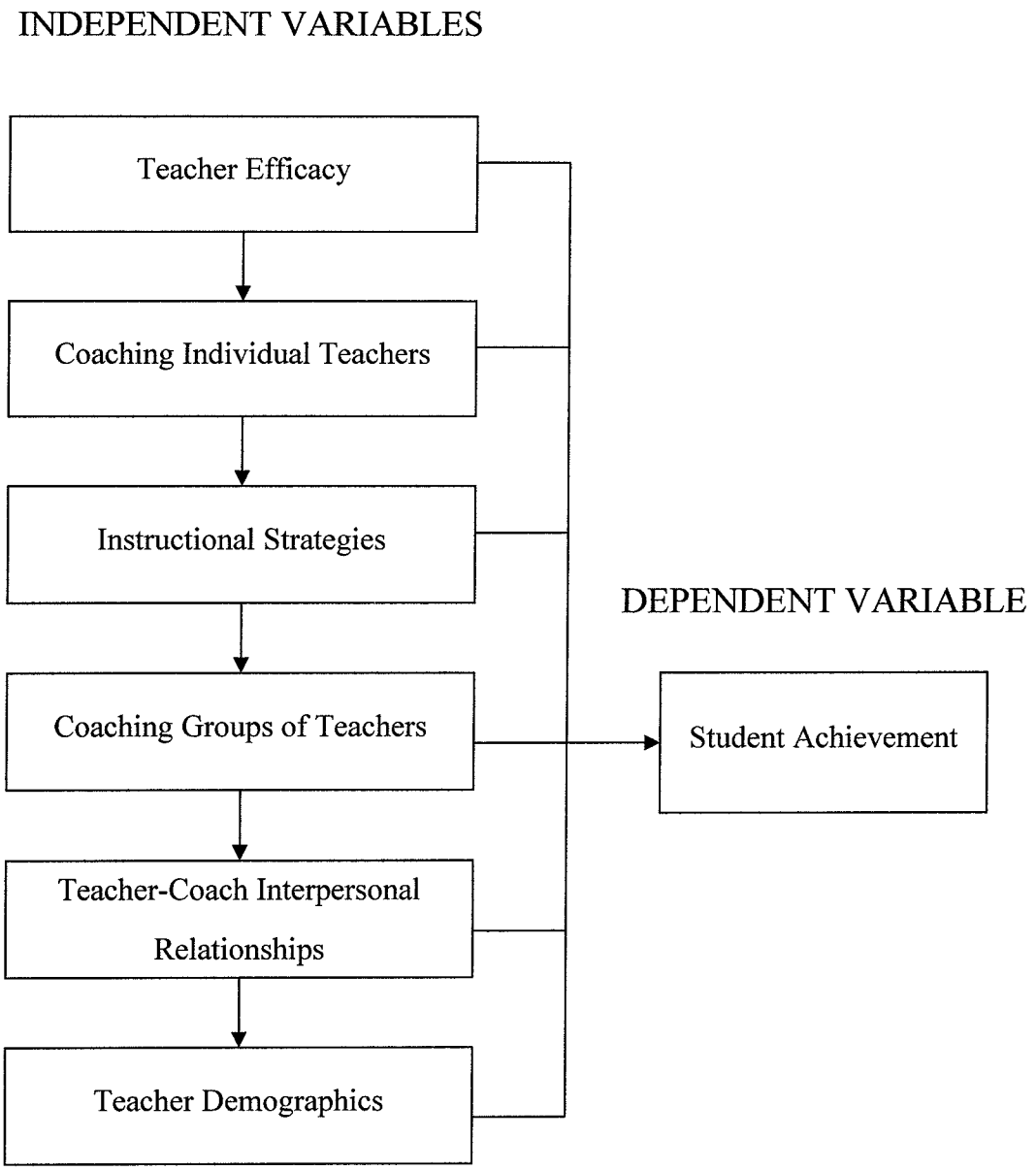

Figure 2. Theoretical Framework

Individualized Professional Development: In this study, Individualized Professional Development refers to individualized teacher coaching; this form of professional development is based upon administrative referrals, coaching observations and individualized self-teacher recommendation.

Group Professional Development: In this study, Group Professional Development refers to whole-group, staff development; the training is implemented by the coach either during grade level or at instructional faculty meetings. These meetings are typically mandatory by the district to ensure that all teachers receive training on new state guidelines and curriculum (GPS).

Instructional Strategies: In this study, Instructional Strategies refer to instructional teaching methods modeled, or facilitated by, the instructional coach (e.g., lesson planning, differentiated reading instruction, writing process and guided reading).

Teacher-Coach Interpersonal Relationship: In this study, Teacher-Coach Interpersonal Relationship refers to the rapport built between teacher and coach that is based upon trust, knowledge, and mutual respect.

Teacher Demographics: In this study, teacher demographics include class size, grade level, teacher experience, educational level, ethnicity, gender, and certification.

Research Questions

RQ1: Is there a relationship between teachers receiving professional development coaching and student achievement?

RQ2: Is there a relationship between teachers' perceptions of group professional development and student achievement?

RQ3: Is there a difference between individualized professional development and group professional development in regards to student achievement?

RQ4: Is there a relationship between teacher efficacy, individualized professional development and student achievement?

RQ5: Is there a relationship between teacher efficacy, group professional development and student achievement?

RQ6: Is there a relationship between teacher demographics, individualized professional development and student achievement?

CHAPTER IV

RESEARCH METHODOLOGY

Introduction

The purpose of this quantitative study is to examine teachers' perceptions of instructional coaching and its impact on student achievement. The case study was conducted in three elementary schools in one of the largest metropolitan school districts in Georgia. The results are based upon the elementary schools' Spring 2008 Criterion Reference Competency Test (CRCT) scores. Prior data for this study were collected via questionnaires to 67 teachers in grades one through five, in four independent elementary level schools in a large Atlanta metropolitan public school district. The four schools conducted in this study were Title I schools assigned to the researcher (Title I Coach) with over 80% student eligibility for free or reduced lunch and with 90% minority student enrollment. Sixty-seven teachers responded to the survey. This prior study was performed in effort to determine those variables that might be impacting student achievement in this sample population. The intent was to isolate those impacting variables and develop a treatment around them using them to try and improve student achievement.

The data from this prior study were analyzed statistically, determining the level of significance between the dependent variable and the independent variables. The quantitative statistical analysis was conducted using the Statistical Package for Social

Sciences (SPSS). The data were subjected to Pearson Correlation analysis to determine the level of significance of the relationship between student achievement and each of the independent variables. The level of significance used in this study for data analysis is .05. The data showed that grade levels that achievement in reading was affected by grade levels. Table 5 shows an inverse correlation of -.369, between grade level and reading achievement which had a significance of 0.00 level. This suggests that reading scores were lower at the higher grades three through five than the lower grades. Table 5 also shows that there was a significant relationship between reading achievement and individual professional development.

Table 5

Correlations of Reading Student Achievement with Independent Variables

	Reading Avg	GradeLvl	TchExp	EdLvl	Ethnicity	Gender	IPD
Reading Avg							
Pearson Correlation	1	*-.369***	053**	.098	.237	.045	*.430***
Sig. (2-tailed)		.002	.670	.430	.053	.720	.000
N	67	67	67	67	67	67	67
Grade Level							
Pearson Correlation	-.369**	1	.089	.122	.039	-120	-.095
Sig. (2-tailed)	.002		.472	.325	.751	.334	.446
N	67	67	67	67	67	67	67
Teaching Experience							
Pearson Correlation	.053	.089	1	.513**	.106	-.114	.204
Sig. (2-tailed)	.670	.472		.000	.393	.358	.098
N	67	67	67	67	67	67	67

Table 5 (continued)

	Reading Avg	GradeLvl	TchExp	EdLvl	Ethnicity	Gender	IPD
Educational Level							
Pearson Correlation	.098	.122	513**	1	-.022	.084	.240
Sig. (2-tailed)	.430	.325	.000		.860	.501	.098
N	67	67	67	67	67	67	67
Ethnicity							
Pearson Correlation	.237	.039	.106	-.022	1	-.010	.235
Sig. (2-tailed)	.053	.751	.393	.860		.938	.055
N	67	67	67	67	67	67	67
Gender							
Pearson Correlation	.045	-120	-.114	.084	-.010	1	.032
Sig. (2-tailed)	.720	.334	.358	.501	.938		.797
N	67	67	67	67	67	67	67
Individual ProfDevop							
Pearson Correlation	.430**	-.095	.204	240	.235	032	1
Sig. (2-tailed)	.000	.446	.098	.098	.055	.797	
N	67	67	67	67	67	67	67

**.Correlation is significant at the 0.01 level (2-tailed).

The correlation coefficient of .430 was significant at the .000 level. A regression was done from this data. The regression from Table 6 supports the correlation finding with respect to the impact of grade level. From table 6, it can be seen that grade level with a beta weight of -.326 and a level of significance of .005 had the greatest impact on reading achievement. The regression also showed that teacher-coach relationship had a significant impact on reading achievement.

Table 6

Predictors of Reading Student Achievement

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Teacher Efficacy	-1.354	.843	-.228	-1.606	.114
Ind Prof Dev	-.392	.651	-.087	-.602	.550
Grp Prof Dev	1.798	.943	.258	1.908	.062
Teach Coach Rel	1.123	.475	.358	2.363	*.022*
Grade Lvl	-3.325	1.143	-.326	-2.909	*.005*
Tch Exp	-.559	1.535	-.044	-.364	.717
Ed Lvl	4.061	2.520	.206	1.611	.113
Ethnicity	4.056	2.200	.198	1.844	.071
Gender	-3.921	4.450	-.097	-.881	.38
IPD	5.793	3.106	.217	1.865	.067

a. Dependent Variable: Reading

The data showed for English Language Arts showed that the variables that were strongly related were individualized professional development with a correlation of .412 and a level of significance of .000 and ethnicity with a coefficient of .249 with a significance of .042. (see Table 7). The regression from Table 8 showed that group professional development that it had a beta score of .369 and a level of significance of .013.

Table 7

Correlations of ELA Student Achievement with Independent Variables

	ELA Avg	Grade Lvl	Tch Exp	Ed. Lvl	Ethnicity	Gender	IPD
English Language Arts							
Average	1	.132	.116	.183	*.249**	.046	*.412**
Pearson Correlation		.287	.350	.138	.042	.711	.000
Sig. (2-tailed)	67	67	67	67	67	67	67
N							
Grade Level							
Pearson Correlation	.132	1	.089	.122	.039	-120	-.095
Sig. (2-tailed)	.287		.472	.325	.751	.334	.446
N	67	67	67	67	67	67	67
Teaching Experience							
Pearson Correlation	.116	.089	1	*.513***	.106	-.114	.204
Sig. (2-tailed)	.350	.472		.000	.393	.358	.098
N	67	67	67	67	67	67	67
Educational Level							
Pearson Correlation	.183	.122	513**	1	-.022	.084	.240
Sig. (2-tailed)	.138	.325	.000		.860	.501	.098
N	67	67	67	67	67	67	67
Ethnicity							
Pearson Correlation	.249*	.039	.106	-.022	1	-.010	.235
Sig. (2-tailed)	.042	.751	.393	.860		.938	.055
N	67	67	67	67	67	67	67
Gender							
Pearson Correlation	.046	-120	-.114	.084	-.010	1	.032
Sig. (2-tailed)	.711	.334	.358	.501	.938		.797
N	67	67	67	67	67	67	67

Table 7 (continued)

	ELA Avg	Grade Lvl	Tch Exp	Ed. Lvl	Ethnicity	Gender	IPD
Individual Prof Develop							
Pearson Correlation	.412**	-.095	.204	240	.235	032	1
Sig. (2-tailed)	.000	.446	.098	.098	.055	.797	
N	67	67	67	67	67	67	67

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 8

Predictors of ELA Student Achievement

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Grade Lvl	1.590	.916	.207	1.735	.088
Tch Exp	-.211	1.231	-.022	-.171	.865
Ed Lvl	3.667	2.021	.248	1.814	.075
Ethnicity	2.825	1.764	.183	1.602	.115
Gender	-1.246	3.569	-.041	-.349	.728
IPD	4.084	2.491	.204	1.639	.107
Teach Eff	-.191	.676	-.043	-.924	.778
Grp Prof Dev	1.932	.756	*.369*	2.556	*.013*
Teach Coach Rel	.676	.381	.287	1.774	.082

b. Dependent Variable: ELA

In summary, the analysis of the data from the pre-study showed that the higher grades in 3-5 needed the most attention because their reading scores were lower than those in grades 1-2. This data analysis also showed that coaching, both individual and group seemed to have a positive influence of student achievement. Based on these findings an intervention was developed focusing on coaching strategies to improve student achievement in grades three through five. For the post-study the surveys were administered again to only teachers in grades third through fifth. The data from these surveys were correlated with the new dependent variable CRCT Spring 2008 test scores in Reading and English language arts.

Research Design

This new study uses a quasi-experimental design to test the hypotheses. A quantitative survey design was selected to examine the cause-effect relationship between the dependent variable and the independent variables.

Sample Population

The sample for this study included approximately 28 third through fifth grade teachers of students participating in free, academic-based elementary level schools in a large Atlanta metropolitan public school district. The three school sites in this study were assigned to the researcher in Title I schools with over 80% student eligibility for free or reduced lunch and 90% minority student enrollment. Minority students in this study include African American, Hispanic, and Asian students. Tables 9-11 show the ethnic distribution and student eligibility for free or reduced lunch for each school.

Table 9

School and Profile and Demographics—School A

Year	Total Enrollment	% Black	% White	% Free/Reduced Lunch
2004-2005	483	98.1	1.9	92.4
2005-2006	457	99	1	96.5

Table 10

School Profile and Demographics—School B

Year	Total Enrollment	% Black	% White	% Hispanic	% Asian	% Multi-Racial	% Free/ Reduced Lunch
2004-2005	571	21	8	56	14	1	85.1
2005-2006	571	23	5	55	15	2	83.8

Table 11

School and Profile and Demographics—School C

School	Years	Number	% of Student Population
A	2004-2005	260	57
	2005-2006	229	42
B	2004-2005	228	40
	2005-2006	179	31
C	2004-2005	257	54
	2005-2006	227	40

Table 12 displays the mobility rates of students in each school. The mobility rate is defined as the percentage of students who enter or leave school between September 1 and the last day of the school year.

Table 12

Mobility Rates of Student Demographics

Year	Total Enrollment	% Black	% White	% Multiracial	% Free/Reduced Lunch
2004-2005	525	98	1	1	92.4
2005-2006	512	97	1	2	96.5

*For the purpose of this document, mobility rate is defined as the percentage of students who enter or leave school between September 1 and the last day of the school year.

Table 13 shows the attrition rate of teachers in each school. Attrition rate is defined as the number of teachers who leave the profession or transfer to another school from the beginning of the school year to the beginning of the next school year, excluding retirement. This information will be significant to the researcher conducting this study when forming teacher-coach relationships and the effectiveness of increasing student achievement in the classroom.

Table 13

Teacher Attrition Rates

School	Years	Number	% Teacher Population
A	2004-2005	6	22
	2005-2006	3	10
B	2004-2005	7	18
	2005-2006	8	19
C	2004-2005	3	10
	2005-2006	4	12

*Attrition rate is defined as the number of teachers who leave the profession or transfer to another school from the beginning of the school year to the beginning of the next school year, excluding retirement.

Description of Sample Sites

School A: The mission of school A is for all students to perform on or above grade level as measured by the Criterion Referenced Competency Test (CRCT). The instructional staff utilizes best practices and standards-based instruction in all of the content areas. Students are assessed using various methods and assessments to drive instruction. The collective efforts of students, parents, community leaders, teachers, coaches and administrative staff is to enhance the student's intellectual, social, and emotional growth by maximizing critical thinking skills.

School B: The belief of school B is that parental involvement is a significant factor in increasing student achievement. Parental involvement is strongly encouraged by

parents applying to this traditional theme school within the greater Atlanta area. Acceptance is based upon available openings and meeting residency requirements. The parental involvement contract commits families to give five volunteer hours per semester, to join PTA, attend conference meetings and other parental functions. All students are required to wear uniforms and high academic expectations are the standard. Instruction is highly emphasized in the content areas of reading, writing and math. Instructional delivery is also individualized to meet students where they are and to move them forward towards academic achievement.

School C: The goals of school C is the belief that all students can learn and this mission can be accomplished by increasing parental involvement, using varied teaching strategies to accommodate differentiated learning styles and using balanced assessments. Staff development and professional educational opportunities are used daily by teachers to improve academic achievement. School C commitment is to work collaboratively to ensure that every child meets or exceeds standards as measured by the Criterion Reference Competency Test (CRCT) without remediation.

Description of Testing of the Instrument

Quantitative data for the dependent variable, student achievement, was collected from Spring 2008 CRCT scores in Reading and English/Language Arts in grades three through five from the Greater Atlanta Public School System Testing and Accountability Department. The independent variable data were collected through a survey developed by the researcher and examined by faculty of Clark Atlanta University for Face and Content Validity (see Appendix A). Section A of the survey, which encompasses

questions 1 through 8, measures teacher efficacy. The independent variable of individual professional development was measured by items 9 through 13 in Section B. Section C measures group professional development in items 14 through 16. Teacher-coach interpersonal relationships were measured in Section D, items 17 through 25. Finally, Section E, items 26 through 30, collected demographic information about the study participants.

Data Collection Procedures

Each subject was given a consent form to participate in this study (see Appendix B). Teachers were reminded that research participation is strictly voluntary and free of any penalties. The researcher distributed consent forms upon approval of this study and disseminated surveys near its completion date to each third through fifth grade teacher in all three assigned schools. This process took place during a regularly scheduled grade level meeting. The researcher collected all surveys during the designated time and date.

Data Analysis

Following the quantitative analysis of school-wide achievement, data from the Spring 2008 CRCT, and the results from grade level teacher surveys were collected and summarized. Recommendations were made based upon research findings in the study. The research questions asked about relationships were tested using the Pearson Correlation. Research question number three was tested using a T-test for differences.

CHAPTER V

ANALYSIS OF THE DATA

The purpose of this quantitative study was to determine teacher perceptions of instructional coaching and its impact on student achievement. The independent variables for the study included teacher efficacy, individualized coaching of teachers, group coaching, instructional strategies, teacher-coach interpersonal relationships and teacher demographics. The dependent variable was the effectiveness instructional coaching had on student achievement.

The data for the study were collected via questionnaire given to all third through fifth grade teachers of students participating in free, academic-based, elementary level classrooms in a large Atlanta metropolitan public school district. The three selected schools were assigned to the researcher located in Title I schools with over 85% student eligibility for free or reduced lunch and 92% minority student enrollment. Twenty-eight teachers responded to the coaching questionnaire.

The data were analyzed statistically, determining the level of significance between the dependent variable and the independent variables. The quantitative statistical analysis was conducted using the Statistical Package for Social Sciences (SPSS). The data were subjected to Pearson Correlation analysis to determine the level of significance of the relationship between Student Achievement and each of the independent variables. The data were then subjected to regression analysis to determine

which independent variables were the strongest predictors of teacher perceptions on instructional coaching (see Appendix C). A t-test was also used to determine differences between group professional development and individualized professional development on student achievement.

Table 14 illustrates the grade level of questionnaire respondents. The table indicates that 14 (39.3%) were third grade teachers, 8 (28.6%) were fourth grade teachers and 9 (32.1%) were fifth grade teachers. There were 28 (100%) respondents who specified their grade level of assigned teaching on the questionnaire.

Table 14

Grade Level Distribution of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Grade 3	11	39.3	39.3	39.3
	Grade 4	8	28.6	28.6	67.9
	Grade 5	9	32.1	32.1	100.0
	Total	28	100.0	100.0	

Table 15 illustrates the teaching experience of questionnaire respondents. The table indicates that 7 (25%) respondents indicated that they have five years or less teaching experience. Fifteen (53.6%) respondents indicated that they have 6-15 years of teaching experience. Six teachers (21.4%) indicated that they have 16 or more years of teaching experience. A total of 28 (100%) respondents specified their years of teaching experience.

Table 15

Teacher Experience Distribution of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-2 years	2	7.1	7.1	7.1
	3-5 years	5	17.9	17.9	25.0
	6-10 years	8	28.6	28.6	53.6
	11-15 years	7	25.0	25.0	78.6
	16+ years	6	21.4	21.4	100.0
	Total	28	100.0	100.0	

Table 16 illustrates the certification level of questionnaire respondents. The table indicates that 25 (89.3%) respondents held certification in the field of Early Childhood Education (P-5), 1 (3.6%) held certification in the field of Secondary Education and 2 (7.1%) held certification in the field of Middle School Grades (4-8). There were 28 (100%) respondents who specified their field of certification.

Table 17 illustrates the educational level of questionnaire respondents. The table shows that 5 (17.9%) questionnaire respondents indicated that their highest degree of educational level was a bachelor's degree in art or science. Twenty-one (75.0%) respondents indicated that they held a master's degree and 2 (7.2%) respondents indicated that they held an educational specialist degree or doctoral degree in educational leadership/philosophy. A total of 28 (100%) respondents specified their highest education level on the questionnaires.

Table 16

Certification Level of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Early Childhood Education (P-5)	25	89.3	89.3	89.3
	Secondary Fields (6-12)	1	3.6	3.6	92.9
	Middle Grades (4-8)	2	7.1	7.1	100.0
	Total	28	100.0	100.0	

Table 17

Education Level of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelors Degree in Arts (BA)/Science (BS)	5	17.9	17.9	17.9
	Masters Degree (MA)	21	75.0	75.0	92.9
	Educational Specialist (Ed.S)	1	3.6	3.6	96.4
	Doctoral Degree in Educational Leadership (Ed.D)/ Philosophy (Ph.D)	1	3.6	3.6	100.0
	Total	28	100.0	100.0	

Table 18 illustrates the ethnicity of the questionnaire respondents. The table indicates that 22 (78.6%) of the respondents indicated that they were African American and 6 (21.4%) indicated that they were Caucasian. A total of 28 (100%) respondents specified their ethnicity on the questionnaire.

Table 18

Ethnicity of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	African-American	22	78.6	78.6	78.6
	Caucasian	6	21.4	21.4	100.0
	Total	28	100.0	100.0	

Table 19 illustrates the gender of questionnaire respondents. The table indicates that 5 (17.9%) respondents were male and 23 (82.1%) respondents were female. A total of 28 (100%) respondents specified their gender on the questionnaire.

Table 19

Gender of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	5	17.9	17.9	17.9
	Female	23	82.1	82.1	100.0
	Total	28	100.0	100.0	

The data were subjected to correlation analysis to determine teacher perceptions of instructional coaching on student achievement and the independent variables. The level of significance used in this study for data analysis is 0.05 and 0.01. The data that follow are reported to answer six research questions identified in Chapter III. The findings are presented in tabular format and analyzed in the narratives that follow. Appendix C provides the data of correlation coefficients to answer research questions 1 and 2.

RQ1: Is there a relationship between teachers receiving professional development coaching and student achievement?

The Pearson Correlation Coefficient was used to determine the significance of the relationship between teachers receiving individualized professional development and student achievement. The correlation coefficient for reading average is 0.410, with a level of significance of 0.03. The correlation coefficient for English language arts average is 0.622, with a level of significance of .00. Furthermore, there was a correlation coefficient in English language arts of those students *who did not* meet achievement of -.733, with a level of significance of .00. In addition to, a correlation coefficient of those students *meeting or exceeding* academic achievement in English language arts is a 0.734 with a level of significance of .00. There is a statistical significant relationship between teacher receiving individualized professional development and student achievement. Therefore, the research question can be answered as positive.

RQ2: Is there a relationship between teachers' perceptions of group professional coaching and student achievement?

The Pearson Correlation Coefficient was used to determine the significance of the relationship between teachers receiving group professional development and student achievement. The correlation coefficient for reading average and group professional development is - 0.168, with a level of significance of 0.394. The correlation coefficient for English language arts average and group professional development is -0.304, with a level of significance of 0.11. There is not a statistical relationship between teachers receiving group professional development and student achievement. Therefore, the research question can be answered as negative.

RQ3: Is there a difference between individualized professional development and group professional development in regards to student achievement?

A t-test for testing the differences between means was used to determine if there is a statistical significant difference in student achievement scores between those teachers who received individualized professional development and those who received group professional development. With respect to reading scores, the mean for those who received group professional development 816.46, standard deviation of 7.389. Teachers who received individualized professional development have a mean of 824.73, standard deviation of 11.048. The t-test showed that there was a significant difference at the .03 level (see Table 20). This means that the students of the individualized professional development teachers scored significantly higher than those who received group professional development. A t-test for testing differences of the mean was used to determine English language arts averages between individualized professional development and group professional development in regards to student achievement.

Table 20

Reading Average Statistics on Professional Development

I.P.D		N	Mean	Std. Deviation	Std. Error Mean
READ AV	Group PD	13	816.46	7.389	2.049
	IPD	15	824.73	11.048	2.853

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
READ AV	Equal variances assumed	2.668	.114	-2.289	26	.030	-8.272	3.613	-15.699	-.844
	Equal variances not assumed			-2.355	24.551	.027	-8.272	3.513	-15.513	-1.031

The group statistics for those who received group professional development has a mean of 813.46, standard deviation of 6.802 and level of significance is 0.00. Teachers who received individualized professional development had a mean of 828.13, standard deviation of 11.413 and level of significance is 0.00. There is a strong significant difference between group professional development and individualized professional development beyond the .01 level. Therefore, the research question can be answered in the positive (Table 21).

Table 21

ELA Average Statistics on Professional Development

I.P.D		N	Mean	Std. Deviation	Std. Error Mean
ELA AV	Group PD	13	813.46	6.802	1.887
	IPD	15	828.13	11.413	2.947

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
ELA AV	Equal variances assumed	4.552	.942	-4.048	26	.000	-14.672	3.625	-22.122	-7.221
	Equal variances not assumed			-4.193	23.267	.000	-14.672	3.499	-21.906	-7.438

RQ4: Is there a relationship between teacher efficacy, individualized professional development and student achievement?

A factor analysis was used to determine the relationship between teacher efficacy, individualized professional development and student achievement. The analysis showed individualized professional development with a coefficient of 0.574, teacher efficacy with a coefficient of -0.536, reading average with a coefficient of 0.882, reading did not meet average with a coefficient of -0.832, and reading meet/exceed average with a coefficient of 0.835 (Table 22).

Table 22

Component Matrix (a)

	Component					
	1	2	3	4	5	6
Grade Lvl	.096	.464	.621	-.125	-.427	-.084
Tch. Exp.	-.457	-.051	.281	.554	.320	-.182
Certification	.008	.338	-.220	.538	.101	-.610
Ed. Level	-.271	-.302	.186	-.187	.517	.453
Ethnicity	.109	.329	-.549	.359	-.407	.436
Gender	-.086	-.074	.238	.704	-.019	.534
I.P.D.	.574	.374	.542	.016	.289	.097
Class CZ	-.250	.814	.138	.192	-.117	.050
READ AV	.882	-.018	-.260	.091	.111	.160
READDNM	-.832	.045	.386	-.031	-.261	.039
READ M/E	.835	-.042	-.384	.030	.261	-.039
ELA AV	.908	.142	.194	.054	-.029	.161
ELA DNM	-.894	-.263	-.277	-.016	.013	.070
ELA M/E	.894	.260	.277	.016	-.014	-.071
TeachEff	-.536	.476	.121	.021	.496	.064
IPDPercep	-.029	.773	-.137	-.254	.277	.015
GroupPD	-.359	.695	-.366	.006	.153	.010
InterPersRel	-.247	.756	-.220	-.278	-.085	.205

Extraction Method: Principal Component Analysis.

a 6 components extracted.

RQ5: Is there a relationship between teacher efficacy, group professional development and student achievement?

A factor analysis was used to determine the relationship between teacher efficacy, group professional development and student achievement. The analysis showed group professional development have a coefficient of -0.359, teacher efficacy with a coefficient

of -0.536, reading average with a coefficient of 0.882, reading did not meet average with a coefficient of -0.832, and reading meet/exceed average with a coefficient of 0.835.

The factor analysis further showed group professional development with a coefficient of 0.695 loaded in factor 2, teacher efficacy with a coefficient of 0.536, English/language arts average with a coefficient of 0.908, English/language arts did not meet average with a coefficient of -0.894 and reading meet/exceed average with a coefficient of 0.894 in factor 1. Therefore, the research question is negative because group professional development is extracted in factor 2 while the other variables remain loaded in factor 1.

RQ6: Is there a relationship between teacher demographics, individualized professional development and student achievement?

A factor analysis was used to determine the relationship between teacher demographics, individualized professional development and student achievement. The analysis showed teacher grade level with a coefficient of 0.621 in factor 3, teacher experience with a coefficient of 0.554 in factor 4, teacher certification with a coefficient of -.610 in factor 6, education level with a coefficient of 0.517 in factor 5, ethnicity with a coefficient of -.549 in factor 3, and gender with a coefficient of 0.704 in factor 4.

The analysis further shows individualized professional development with a coefficient of 0.574 in factor 1, reading average with a coefficient of 0.882 in factor 1 and English/language arts average with a coefficient of 0.908 in factor 1. Therefore, the research question is negative because demographics, individualized professional

development and student achievement have no statistical relationship with other variables. The variables are loaded in separate factors.

Table 22 shows a factor analysis (component matrix) which was used to determine the relationship between teacher demographics, individualized professional development and student achievement. It showed teacher grade level with a significance of 0.621 in factor 3, teacher experience with a significance of 0.554 in factor 4, teacher certification with a significance of 0.538 in factor 3, education level with a significance of 0.517 in factor 5, ethnicity with a significance of -0.549 in factor 3, and gender with a significance of 0.704 in factor 4.

The analysis further shows individualized professional development with a significance of 0.574 in factor 1, reading average with a significance of 0.882 in factor 1 and English/language arts average with a significance of 0.908 in factor 1. Therefore, the research question is negative because demographics, individualized professional development and student achievement have no statistical relationship with other variables. The variables are sporadically loaded in separate factors.

Table 23 shows a regression analysis which was used to further determine which independent variables had the strongest impact on student achievement. The data were analyzed with respect to reading. The regression showed that the strongest impacting variables were ethnicity, teacher efficacy, individualized professional development and class size.

Table 23

Model Summary of Reading Average

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.506(a)	.256	.228	9.013
2	.671(b)	.450	.406	7.902
3	.748(c)	.559	.504	7.222
4	.811(d)	.657	.597	6.509

a Predictors: (Constant), TeachEff

b Predictors: (Constant), TeachEff,

c Predictors: (Constant), TeachEff, I.P.D, Ethnicity

d Predictors: (Constant), TeachEff, I.P.D, Ethnicity, Class CZ

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	842.452	7.398		113.881	.000
	TeachEff	-1.517	.506	-.506	-2.995	.006
2	(Constant)	829.883	7.744		107.158	.000
	TeachEff	-1.595	.445	-.533	-3.586	.001
	I.P.D.	8.910	3.00	.441	2.970	.006

Table 24 shows a regression analysis which was used to further determine which independent variables had the strongest impact on student achievement. The data were analyzed with respect to English/language arts, which the regression showed that the strongest impacting variables again were individualized professional development, teacher efficacy, and ethnicity.

Table 24

Model Summary of ELA Average

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.622(a)	.387	.363	9.565
2	.763(b)	.582	.548	8.055
3	.809(c)	.655	.611	7.471

a Predictors: (Constant), I.P.D

b Predictors: (Constant), I.P.D, TeachEff

c Predictors: (Constant), I.P.D, TeachEff, Ethnicity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	798.790	5.853		136.484	.000
	I.P.D.	14.672	3.625	.622	4.048	.000
2	(Constant)	819.853	7.894		103.863	.000
	I.P.D.	15.291	3.058	.648	5.001	.000
	TeachEff	-1.549	.453	-.443	-3.416	002

CHAPTER VI

FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this study was to determine the effectiveness of individualized professional development and other variables on student achievement as perceived by teachers. The independent variables of the study included teacher efficacy, individualized coaching, group coaching, instructional strategies, interpersonal relationships and teacher demographics. The dependent variable was student achievement in reading and English language arts.

The data for the study was collected via questionnaire given to teachers in grades third through fifth of students participating in free, academic-based, elementary school in a large Atlanta metropolitan public school district. The three selected elementary schools were located in Title I schools with over 83% student eligibility for free or reduced lunch and 98% minority student enrollment. Twenty eight third through fifth grade teachers responded to the survey.

The analysis of data is related to the six research questions identified in Chapter III. Pearson Correlation analysis, regression analysis, t-tests, and factor analysis were the statistical tools used to compute data. The research questions were answered based on the results obtained. The level of significance used in this study for data analysis was 0.05 and 0.01. Findings and conclusions are presented based on the analysis of obtained data. Implications and recommendations are also discussed in this chapter.

Findings

The findings for each research questioned have been summarized in relation to the specific variables. A summary of the findings follows.

Research Question 1 can be answered in the positive. There is a statistical significant relationship between teacher receiving professional development coaching and student achievement.

Research Question 2 can be answered in the negative. There is not a statistical relationship between teachers' perceptions of group professional development and student achievement.

Research Question 3 can be answered in the positive. There is a strong significant statistical difference between group professional development, individualized professional development and student achievement beyond the .01 level.

Research Question 4 can be answered in the positive. There is a statistical significant relationship between teacher efficacy, individualized professional development and student achievement. All of the variables can all be grouped together using in factor analysis 1.

Research Question 5 can be answered in the negative. There is not a statistical relationship between group professional development, teacher efficacy and student achievement. Group professional development is extracted in factor 2 while the other variables remain loaded in factor 1.

Research Question 6 can be answered in the negative. There is not a statistical relationship between individualized professional development, teacher demographics and student achievement. The variables are sporadically loaded in separate factors.

Summary

The regression analysis found the most impacting variables on student achievement were individualized professional development and teacher efficacy.

Conclusions

The conclusions from the findings in terms of the Pearson Correlation Coefficient, t-tests and factor analysis are presented below.

Research Question 1 indicated a statistically significant relationship between teachers receiving professional development coaching and student achievement. This finding suggests that those teachers who utilized the instructional strategies, delivery methods and support from the coach, students scored significantly higher in student achievement than those who only received group coaching.

Impact of Coaching Individual Teachers

Research supports the implication made by the researcher that individualized coaching has a significant impact on student achievement. Burkhart (2004), Morgan and Menlove (1994), and Victoria University (2002) insist that coaching increases teaching skills for preservice, low-performing, and experienced teachers in the profession. Additionally, new teacher retention rates improve in districts with instructional coaches versus those without (Griffin, Wohlsetter, & Bharadwaja, 2001). The reason for this is

that the level of support for the novice can be personalized to meet their needs and is non-evaluative in nature (Griffin et al., 2001).

In this study, the researcher performed individualized professional development by way of either administrative teacher referrals, personal teacher requests or solely upon the researcher's observations. The researcher held an initial meeting with those teachers in grades 3-5, to discuss the decline in student achievement. Teachers were asked, "What were some of the obstacles to increasing student achievement in grades 3-5?" While the subjects recited some of the issues, the researcher prioritized the outcomes on chart paper: lesson planning, usage of higher order thinking skills, and meeting the needs of diverse learners; were among the top three. Based upon the previous meeting, grade level sessions were scheduled to investigate the causes closer by examining the subject's current lesson plans. Upon closer examination from the researcher and the subjects, what became apparent was the lack of higher level questioning from the teachers, lack of support to meet individual needs and a lack of relevance to bridge concepts to spark student interest. Throughout the fall semester, the researcher held *pre-lesson plan* meetings to critique the subjects existing plans but this time analyzing them using the High Definition Lesson Planning Format (Persuad & Turner, 2002). This lesson plan tool checks the accuracy of the instructor's use for assessing student performance in relation to causal factors, by identifying the objectives to improve weak concepts, if the delivery process incorporates higher order thinking, and if the assessments used for student performance is varied (multiple-choice, short-responses, long responses). The researcher also held individual teacher-coach conferences to assist subjects with creating

plans in addition to performance based assessments to meet diverse student learning needs. These individual meetings were based in the majority upon teacher requests. Those individual subjects who requested additional assistance from the researcher met routinely to conduct *post-lesson plan* meetings to increase their sense of efficacy. After one to two months the subjects' level of confidence grew, based upon teacher feedback, the researcher revisited the priority list on the lack of higher order questioning usage in the classroom. Throughout the fall semester, the subjects would watch a demonstrated lesson performed by the coach, participate in team-teaching instructional practices and collaborate on new ideas. However, as the interpersonal relationships grew among the subjects and the researcher towards the end of the winter term a comfort level was formed. Then, the researcher introduced the Observation Based Instructional Assessment (OBIA) System (Persuad, 2006). The individual subjects initially were not given prior directions on the observational tool. It was meant to be a *pre-observational* data analysis. Therefore, much discussion was about the content to be taught and a video taped session would be in progress. On numerous occasions after school individual subjects and the researcher would schedule a viewing of the video and discuss the outcomes of the Observation-Based Instructional Assessment (OBIA). This served as a *post-observation* to discuss whether or not if the subjects used majority of the instructional time using lower or higher order questioning strategies with the students. It served as a tool to examine how often the subjects referred learning to different concepts or content and most importantly if the transfer of knowledge was relevant to student interests. The OBIA monitors the instructor's use of procedural communication, student social

experiences, curriculum content, related concepts to previous lessons, related concepts to different subject areas, assessment of students, managing of social behavior and technical resources. The video taping of the lessons served as visual feedback for both the researcher and the subjects to refer back to points of reference, guidance, questioning patterns, student responses and student engagement. The OBIA was used with the researcher and the individual subjects throughout the winter and early spring semester until the arrival of the Georgia Criterion Reference Competency Test (GCRCT). Fifteen out of 28 subjects were engaged in at least two to three teacher-coach conferences a month to discuss lesson planning, how to meet the needs of diverse learners and how to

Impact of Instructional Strategies

Research supports the implication made by the researcher that coaches who model effective teaching techniques and collaborate with teachers on an individualized basis, their students are more likely to have higher test scores than those who are not. Feger, Hickman, and Woleck (2004) insist that a coach must be proficient in coaching strategies and structures, such as how to use pre- and post-conferences, the role of questioning techniques, lesson planning and how to utilize teaching artifacts.

Increasing the instructional capacity of teachers is considered to be a prerequisite to impacting student achievement (Neufield & Roper, 2003). It gives credence to the belief that teachers who receive instructional coaching improve student performance by their increased teaching skills (North Central Educational Regional Laboratory, 2003).

Research Question 2 indicated that there is not a statistical relationship between group professional development and student achievement. This finding suggests that group coaching alone does not increase student achievement in the classroom.

Impact of Group Coaching

Research supports the implication made by the researcher that group coaching does not play a significant role in student achievement. Knight (2004) indicated that group coaching requires more time than a single meeting and it cannot be delineated in an agenda. Ideally, groups should be small, consisting of no more than 10 to 12 people. Group coaching offers an opportunity to accelerate learning through the synergy of shared knowledge and experience in a learning community.

Knight (2004) further indicates that instructional coaches begin the change process by meeting with each school department, or team. The coach explains that teachers have an opportunity to learn about new research-validated teaching practices that are designed to make classes more accessible and help students to become better learners.

However, as indicated in this study, if the instructional strategies are not being monitored by administrators and accountability measures are not in place to support the instructional coaches' efforts then the group coaching loses value and becomes ineffective.

Research Question 3 indicated that there is a strong statistical difference relationship between group professional development, individualized professional development and student achievement. This finding suggests that the students of those

teachers who received individualized coaching scored significantly higher than those who only received group coaching.

Research Question 4 indicated a statistically significant relationship between teacher efficacy, individualized professional development and student achievement. This finding suggests that when an instructional coach is present in the classroom by modeling new techniques and collaborating with teachers on finding new ways to increase student achievement, they soon feel more confident and motivated to continue the strategies previously taught. Therefore, student achievement is significantly increased.

Impact of Teacher Efficacy

Research supports the implication made regarding the importance of teacher efficacy in the classroom. Soodak and Podell (1994) indicated that teachers with higher personal teaching efficacy were more likely to make teacher-based suggestions to meet the student's needs than teachers with low personal teaching efficacy. Soodak and Powell further states that teachers with low personal teaching efficacy were more likely to look for solutions outside of their own classroom. This is important because teachers who look for solutions outside of their own classrooms, and who believe student problems are cause by external factors, are more likely to refer students to special education (Ashton, 1985).

Research Question 5 indicated that there is not a statistical relationship between group professional development, teacher efficacy and student achievement. This finding suggests that even though a teacher may receive guidance and introduction to new strategies during group professional development, they may not feel as compelled to

implement, confidence to initiate or even feel motivated to perform this new instructional practice. Therefore, student achievement does not increase.

Research Question 6 indicated that there is not a statistical relationship between teacher demographics, individualized professional development and student achievement. This finding suggests that a specific grade level, years of teaching experience, certification, educational level, ethnicity, or gender does not have any significance in increasing student achievement when receiving individualized coaching.

Discussion of Findings

Research further supports the implication made regarding the importance of teacher-coach relationships and its effectiveness on student achievement. The Pearson Correlation Coefficient was used to determine the significance of individualized professional development perceptions in respect to teacher efficacy, group professional development perceptions and teacher-coach interpersonal relationships. The correlation coefficient between individualized professional development perceptions on coaching and teacher-coach relationships average was 0.582, with a level of significance of 0.01, *group professional* development perceptions average was 0.585, with a level of significance of 0.01, and teacher efficacy average was .414, with a level of significance of .029.

Implications

Even though the instructional leader of the school is recognized as the principal, a recent trend across the country in public education has been to hire instructional coaches to assist with the daily task of guiding teachers through implementation of best practice

strategies in the classroom (Taylor, 2004; Edna McConnell Clark Foundation, 2003). This is happening in part due to school and district attempts to meet or exceed the guidelines established as a result of the No Child Left Behind legislation, which calls for greater accountability within schools. Additionally, the trend has developed as a result of studies that has shown that job embedded professional development is more effective that traditional one day workshops as a collaborative culture develops in which educators focus on improving student learning as a team effort (The Aspen Institute, 2003; Darling-Hammond & McLaughlin, 1995).

Reformers argue that professional development is needed to help teachers teach for understanding requires both new ideas about what counts as professional development and new policies that provide the framework within which professional development can occur. Darling-Hammond and McLaughlin (1995) suggested that the best information available the essential features of professional development must be grounded in inquiry, reflection, and experimentation that are participant-driven. It must be collaborative, involving a sharing of knowledge among educators and a focus on teachers' communities of practice rather than on individual teachers. It must be sustained, on-going, intensive, and supported by modeling, coaching, and the collective solving of specific problems of practice. It must be connected and derived from student work. It must be engaging teachers in assessment, observation and reflection that illuminate the process of learning and development.

Recognizing professional development along these lines has led to great interest in coaching as a critical component of teacher professional development. Implementing a

coaching model does not mean giving up other approaches to teacher learning. However, improving teacher learning and in turn increasing student learning requires professional development that is closely aligned and explicitly tied to teachers' on going work. Instructional coaching addresses that requirement (Darling-Hammond & McLaughlin, 1995).

The purpose of this quantitative study was to determine teacher perceptions of instructional coaching and its impact on student achievement. The independent variables for the study included teacher efficacy, individualized coaching of teachers, group coaching, instructional strategies, teacher-coach interpersonal relationships and teacher demographics. The dependent variable was student achievement. The case study was conducted in three elementary schools in one of the largest metropolitan school districts in Georgia. Few studies have been conducted that connect improvement in student achievement and enhanced teacher practice to the presence of instructional coaches within the school setting.

Placing instructional coaches within schools makes professional growth convenient, collegial, continuous, and responsive to direct teacher needs and requests. Further, coaches can differentiate the training to meet the needs of novice and experience teachers, decreasing the isolation of all. Some school districts assign coaches to certain schools, others are assigned to just certain teachers. It is up to that district to decide what is best to suit their instructional needs based on funding, resources and professional development.

In the district under study, there are approximately 100,000 students, 3.3% are Asian, 75% are African American, 8.4% are Hispanic, 10.1% are Caucasian and 2.5% are other. Out of 84 elementary schools 60 are federally funded. There are currently 20 middle schools and 13 receive federal dollars and out of 21 high schools 14 are Title I as well. To better service these schools with adequate resources and support title coaches were assigned to each of them.

There are 61 Title I instructional coaches serving 87 Title I schools in this district of study. Twenty are elementary coaches assigned to approximately 3 to 4 elementary schools each, 26 middle school coaches are assigned to two middle schools each, and 15 high school coaches are assigned two high schools each. The purpose of one coach per elementary school during the 2007-08 school year was due to 80% or greater Title I elementary schools meeting adequate yearly progress (AYP) according to NCLB requirements. However, at the middle and high school levels there was a decline in student achievement in regards to reading and mathematics. Therefore, at the middle and high school levels, two coaches were assigned to each departmental level teacher to support them in the areas of either Reading/English language arts or mathematics.

Implications for District Officials

In this district under study, principals in schools without coaches struggle for the same instructional support person to be added to their facilities as they have witnessed the difference the coaching program has made in Title I schools. For another district to obtain similar results, it may be necessary for that district to investigate funding costs to hire instructional coaches. Districts must decide how many coaches will be needed and

how to disseminate coaches within the county for maximum impact on instruction. Therefore, districts need to decide if they have adequate funding to support for an instructional coaching program. District leaders need to investigate and secure resources for salaries, materials, training, and even a meeting facility for coaches to participate in professional learning opportunities.

The instructional coach in this study gathered bi-monthly at a common site with other Title I coaches to exchange ideas, participate in district training and analyze system-wide data with their Title I district coordinator. It is extremely important to allow coaches reflection time to exchange model lesson ideas, research the latest instructional strategies, and receive content specific training from district coordinators. Coaches can feel isolated in this professional visiting several schools at a time therefore providing a time to share celebrations or challenges has been quite beneficial in strengthening their coaching abilities.

Hiring an instructional coach can be quite unique. District officials must enlist those who understand the instructional reform they are helping teachers to implement. They must be skillful with working with adult learners and they must know how to adjust their coaching techniques to the knowledge and skill of the teachers with whom they are servicing. Coaches work with individual teachers and with small groups. They must have a professional disposition that is encouraging and promotes teacher learning to meet their needs by targeting conversations around instruction, test scores, professional development opportunities, bringing in research-based articles, and guidance in developing new practices.

Districts need to research and create a uniformed coaching job description to fit their individual needs and communicate it to fellow administrators. If the job description is not in place prior to hiring coaches it would lead to inconsistency throughout the system and role confusion for others. Administrators and teachers within the building should be aware of coaching roles and responsibilities. Coaches need to be clear in delivering district roles and responsibilities. They are in place to support teacher instructional delivery not to be utilized as school evaluators. One of the ways to ensure trust and build interpersonal relationships is to make teachers feel comfortable in practicing new techniques in the classroom without the scrutiny of being officially observed. Coaches need support from their principals and from the district about how to set coaching priorities so that roles and expectations are clear to all of those being served in the school site. Schools are sometime short-staffed therefore, ask the coach to perform inappropriate tasks that interfere with their ability to coach. They maybe asked to substitute, perform administrative, lunch and cafeteria duties. It is up to district officials to hold and make principals aware of a coach's role and responsibilities. It is also up to district leaders to hold those administrators accountable for maintaining those guidelines.

District leaders need to be aware that some teachers will be resistant to change. More commonly, some teachers will simply ignore a coaches' suggestion towards a new practice or deny an opportunity for coaching support. District officials need to communicate to administrators that high expectations are for all teachers including those who are reluctant. They can reinforce this message by holding principals accountable for implementing the district plan. On the other hand, if a coach finds themselves with a

weak administrator who can not organize a schedule to accommodate a coaching staff development or unable to allow coaches to implement instructional strategies in classrooms impedes a coaches' work. It is up to districts to provide administrators with the proper developmental skills and leadership techniques to support the coaching program, because weak leadership stifles coaching effectiveness.

Coaching shows great promise for changing professional practice and the culture in which teachers work. However, if the district neither supports nor holds principals and others accountable, no program will be effectively implemented.

Recommendations

Knowing that instructional coaching will not be available indefinitely, coaches need to help teachers and administrators build instructional capacity to purse school improvement efforts themselves. Coaching is geared towards changing the culture of isolation in which teachers have worked for decades. Teachers and principals work collaboratively to improve their practice, can over time and with support of a knowledgeable coach, accomplish much more than have been accomplished to date. The following recommendations are based on the findings of this research study:

Recommendations for Policy

1. The system should provide more individualized professional development in the classroom. More coaches are needed in order to spend significant amount of time to perform instructional strategies with teachers.

2. To improve teacher efficacy in the classroom, the system needs to strengthen their professional development by providing the kind of instructional strategies that was used in this study.
3. Follow the High Definition Lessoning Planning Model and the Observation-Based Instructional Assessment (OBIA).
4. Provide clear, explicit, and continuing support for the coaching program. The most important condition to for successful coaching is district support for coaches. The support from district officials and administrators is paramount in making a coaching program effective. Coaches have no formal authority; they cannot insist that those they coach change their practice, nor can they threaten them with poor performance reviews. As a result, their credibility depends highly on the skill they bring to the job and interpersonal relationships they build with teachers. However, even with high credibility and trust, coaches can not do their work if the teachers and principals do not know how to support them.
5. Ensure that the process of selecting coaches at the district is rigorous and fair. Hire coaches who will be credible to teachers and principals with whom they work. This study showed that interpersonal relationships played a significant role in teacher perceptions of a coaches' effectiveness. Therefore, before hiring a coach seek a balance of one with a pleasant disposition and professional expertise. In many areas this is highly important because those

coaches deployed in Title I schools could face teachers who exhibit low teacher efficacy, with students from low achieving and diverse backgrounds.

Recommendations for Further Research

1. Replications of the present study need to include additional variables possibly affecting student achievement (e.g. parental involvement or low SES).
2. Replication of the present study need to involve a comparison of responses of those teachers from Title I schools from low income, minority parents in other suburban school districts.
3. Replication of the present study need to involve a comparison of responses of those teachers from Non-Title I schools in other school districts.
4. Further research may wish to use other methods of measuring the independent variables used in the study (e.g. quantitative study).

Summary

The findings and conclusions from this study were outlined in this chapter. Implications were discussed and recommendations based on findings were suggested. It is hoped that the recommendations from the study will assist district leaders and inform other coaches about the effectiveness coaching has on student achievement as perceived by teachers.

APPENDIX A

Teacher Questionnaire

Dear Teacher:

You are kindly asked to complete this questionnaire. The data will be used for a dissertation at Clark Atlanta University. The purpose of this study is to determine teacher perceptions of the effectiveness coaching has on student achievement. Your answers will be kept confidential.

Please do not write your name on this survey. Thank you for your time.

Directions: Please place a (**x**) in the box that best represents your thinking about each of the following statements.

KEY: *SA= Strongly Agree* *A= Agree* *D=Disagree* *SD=Strongly Disagree*

DN=Does Not Apply

A. Teacher Efficacy (involving confidence level of implementing instructional strategies modeled by the instructional coach)

The instructional coach:	SA	A	D	SD	DN
1. Makes teachers feel confident about implementing instructional techniques in the classroom.					
2. Makes teachers feel motivated to continue the strategies modeled in the classroom.					
3. Makes teachers feel confident with implementing new performance-based standards.					
4. Makes teachers feel motivated to teach in a variety of ways.					
5. Makes teachers feel motivated to reach difficult to teach students.					
6. Makes teachers feel motivated to teach students from culturally different backgrounds.					

Appendix A (continued)

The instructional coach:	SA	A	D	SD	DN
7. Suggests instructional methods that are effective in motivating students to carry out the performed task.					
8. Recommends instructional methods that are effective in helping all students learn.					

B. Individualized Professional Development (involves individualized coaching, modeling and conferencing with a teacher)

The instructional coach:	SA	A	D	SD	DN
9. Supports teachers by modeling instructional strategies in the classroom to increase academic achievement.					
10. Supports teachers by conferencing and communicating instructional practices based upon student needs.					
11. Provides teachers with instructional support (co-teaching, resources, technology support)					
12. Supports teachers through observations by providing appropriate feedback to increase student achievement.					
13. Provides support by implementing the new state curriculum.					

C. Group Professional Development (whole group, monthly professional development implemented during grade level or faculty meetings)

The instructional coach:	SA	A	D	SD	DN
14. Supports teachers by analyzing and communicating grade level student work.					
15. Supports teachers by analyzing and communicating school-wide student data.					

Appendix A (continued)

The instructional coach:	SA	A	D	SD	DN
16. Supports teachers by analyzing and communicating district wide student data.					

D. Teacher-Coach Interpersonal Relationships (the rapport built between the teacher and coach based upon trust, knowledge and mutual respect)

The instructional coach:	SA	A	D	SD	DN
17. Allows teachers the opportunity to express instructional concerns as it relates to student work.					
18. Makes teachers feel comfortable being observed with constructive feedback to improve student achievement.					
19. Makes teachers feel comfortable with asking questions during an instructional workshop.					
20. Makes teachers feel comfortable with implementing a new state curriculum.					
21. Maintains a positive working relationship with the teacher.					
22. Makes teachers feel that the instructional coach has content knowledge to demonstrate lessons to others.					
23. Makes teachers feel that they have learned other teaching strategies while watching a coach demonstrate a lesson.					
24. Makes teachers believe that watching a lesson made it easier to implement an instructional practice.					
25. Makes teachers think that watching a demonstrated lesson increased their fidelity towards instructional practice.					

Appendix A (continued)

E. Background Information:

26. Place a check next to a specific grade level:

    3rd____ 4th___ 5th____

27. Place a check next to the years of teaching experience:

    1-2 years _____ 3-5 years _____ 6-10 years____

    11-15 years____ 16 years or more_____

28. Place a check next to field of certification you currently hold (if more than one, please check all that apply to you)

    Early Childhood Education (P-5) _____ Secondary Fields (6-12)_____

    Middle Grades (4-8) _____ Special Education (P-12)_____

    Teaching Endorsements_____ Educ. Leadership (P-12)_____
    (Gifted, English Speaker of Other languages/
    ESOL, Intervention Specialist)

29. Place a check next to your highest educational degree:

    BA/BS degree _____ MA degree_____

    Ed.S. degree _____ Ed.D/Ph.D._____

30. Place a check next to your ethnicity:

    African-American_____ Caucasian_____

    Hispanic_____ Asian/Pacific Islander _____ Other_____

31. Place a check next to your gender: male_____ female____

Thank you for your time and cooperation.

APPENDIX B

Letter of Informed Consent

May 16, 2008

Dear Colleague:

I am currently enrolled as a graduate student at Clark-Atlanta University. As a requirement for my Doctoral Program, I will be conducting a research project entitled, *The Effectiveness of Instructional Coaching and Other Variables on Student Achievement as Perceived by Teachers: Implications for Educational Leaders.* I am requesting your permission to include you as a participant in this project.

This project will begin on May 16, 2008 and end on December 21, 2008. The project will involve your assigned instructional coach to model instructional strategies in your classrooms, facilitate grade level meetings, faculty meetings, videotape lessons and conduct classroom observations. As a part of this research, I will need to look at Criterion Referenced Competency Test scores, district-level benchmark assessments, State Writing Assessment Test Scores and student work.

Possible benefits for the participants of this project would be to determine if teachers benefit more from individualized coaching or group coaching more than others, what role (if any) does interpersonal relationships play in regards to teacher efficacy, and even though this position have been around for quite some time, there is still a lack of significant evidence to determine the effectiveness on student achievement. Therefore, this project will not only determine it's validity on instructional coaching but also how teachers perceive their support.

Your participation in this project is voluntary. You will not be penalized or lose any benefits that you are otherwise entitled to if you decide that you will not participate in this research project. If you decide to participate in this project, you may discontinue at any time without penalty or loss of benefits.

If you have any questions or concerns about this project, please contact me at (404) XXX-XXXX.

Taffeta T. Young, Instructional Coach
Office of School Improvement

* * * * * *

If you agree to participate in this research, please complete the information below:

_____	_____	_____
Participant's Name (please print)	Participant's Signature	Date

APPENDIX C

Correlations for Variables

		Grade Lvl	Tch. Exp.	Certification	Ed. Level
Grade Lvl	Pearson Correlation	1	-.081	.028	-.153
	Sig. (2-tailed)		.683	.887	.436
	N	28	28	28	28
Tch. Exp.	Pearson Correlation	-.081	1	.233	.136
	Sig. (2-tailed)	.683		.233	.490
	N	28	28	28	28
Certification	Pearson Correlation	.028	.233	1	-.296
	Sig. (2-tailed)	.887	.233		.127
	N	28	28	28	28
Ed. Level	Pearson Correlation	-.153	.136	-.296	1
	Sig. (2-tailed)	.436	.490	.127	
	N	28	28	28	28
Ethnicity	Pearson Correlation	-.059	-.228	.150	-.231
	Sig. (2-tailed)	.765	.244	.446	.238
	N	28	28	28	28
Gender	Pearson Correlation	-.040	.294	-.019	.101
	Sig. (2-tailed)	.842	.129	.925	.609
	N	28	28	28	28

Appendix C (continued)

		Grade Lvl	Tch. Exp.	Certification	Ed. Level
I.P.D	Pearson Correlation	.346	-.021	-.090	-.112
	Sig. (2-tailed)	.071	.914	.648	.570
	N	28	28	28	28
Class CZ	Pearson Correlation	.492(**)	.211	.298	-.139
	Sig. (2-tailed)	.008	.282	.123	.482
	N	28	28	28	28
READ AV	Pearson Correlation	-.140	-.339	.010	-.145
	Sig. (2-tailed)	.478	.077	.959	.463
	N	28	28	28	28
READDNM	Pearson Correlation	.216	.362	-.123	.170
	Sig. (2-tailed)	.270	.058	.532	.386
	N	28	28	28	28
READ M/E	Pearson Correlation	-.214	-.363	.123	-.171
	Sig. (2-tailed)	.273	.058	.532	.384
	N	28	28	28	28
ELA AV	Pearson Correlation	.265	-.336	-.043	-.155
	Sig. (2-tailed)	.172	.080	.828	.430
	N	28	28	28	28
ELA DNM	Pearson Correlation	-.345	.372	-.110	.302
	Sig. (2-tailed)	.072	.051	.577	.118
	N	28	28	28	28
ELA M/E	Pearson Correlation	.342	-.374(*)	.109	-.306
	Sig. (2-tailed)	.075	.050	.580	.114
	N	28	28	28	28

Appendix C (continued)

		Grade Lvl	Tch. Exp.	Certification	Ed. Level
TeachEff	Pearson Correlation	.043	.282	.176	.276
	Sig. (2-tailed)	.827	.147	.370	.155
	N	28	28	28	28
IPDPercep	Pearson Correlation	.167	-.117	.180	-.059
	Sig. (2-tailed)	.394	.552	.359	.764
	N	28	28	28	28
GroupPD	Pearson Correlation	-.053	.073	.284	-.167
	Sig. (2-tailed)	.788	.712	.143	.395
	N	28	28	28	28
InterPersRel	Pearson Correlation	.237	-.102	-.009	-.142
	Sig. (2-tailed)	.225	.604	.964	.471
	N	28	28	28	28

		Ethnicity	Gender	I.P.D	Class Size
Grade Lvl	Pearson Correlation	-.059	-.040	.346	.492(**)
	Sig. (2-tailed)	.765	.842	.071	.008
	N	28	28	28	28
Tch. Exp.	Pearson Correlation	-.228	.294	-.021	.211
	Sig. (2-tailed)	.244	.129	.914	.282
	N	28	28	28	28
Certification	Pearson Correlation	.150	-.019	-.090	.298
	Sig. (2-tailed)	.446	.925	.648	.123
	N	28	28	28	28

Appendix C (continued)

		Ethnicity	Gender	I.P.D	Class Size
Ed. Level	Pearson Correlation	-.231	.101	-.112	-.139
	Sig. (2-tailed)	.238	.609	.570	.482
	N	28	28	28	28
Ethnicity	Pearson Correlation	1	.243	-.212	.354
	Sig. (2-tailed)		.212	.279	.065
	N	28	28	28	28
Gender	Pearson Correlation	.243	1	.127	.053
	Sig. (2-tailed)	.212		.520	.790
	N	28	28	28	28
I.P.D	Pearson Correlation	-.212	.127	1	.196
	Sig. (2-tailed)	.279	.520		.319
	N	28	28	28	28
Class CZ	Pearson Correlation	.354	.053	.196	1
	Sig. (2-tailed)	.065	.790	.319	
	N	28	28	28	28
READ AV	Pearson Correlation	.273	-.033	.410(*)	-.253
	Sig. (2-tailed)	.159	.869	.030	.194
	N	28	28	28	28
READDNM	Pearson Correlation	-.178	.167	-.323	.267
	Sig. (2-tailed)	.365	.396	.094	.170
	N	28	28	28	28
READ M/E	Pearson Correlation	.178	-.167	.327	-.266
	Sig. (2-tailed)	.366	.396	.089	.172
	N	28	28	28	28

Appendix C (continued)

		Ethnicity	Gender	I.P.D	Class Size
ELA AV	Pearson Correlation	.163	.037	.622(**)	-.059
	Sig. (2-tailed)	.407	.854	.000	.767
	N	28	28	28	28
ELA DNM	Pearson Correlation	-.018	.041	-.733(**)	.017
	Sig. (2-tailed)	.926	.835	.000	.933
	N	28	28	28	28
ELA M/E	Pearson Correlation	.017	-.040	.734(**)	-.020
	Sig. (2-tailed)	.932	.840	.000	.918
	N	28	28	28	28
TeachEff	Pearson Correlation	-.085	.085	.059	.473(*)
	Sig. (2-tailed)	.667	.667	.764	.011
	N	28	28	28	28
IPDPercep	Pearson Correlation	.129	-.207	.230	.512(**)
	Sig. (2-tailed)	.513	.290	.240	.005
	N	28	28	28	28
GroupPD	Pearson Correlation	.261	-.043	-.064	.467(*)
	Sig. (2-tailed)	.180	.827	.745	.012
	N	28	28	28	28
InterPersRel	Pearson Correlation	.312	-.165	.062	.574(**)
	Sig. (2-tailed)	.106	.402	.755	.001
	N	28	28	28	28

Appendix C (continued)

		READ AV	READDNM	READ M/E
Grade Lvl	Pearson Correlation	-.140	.216	-.214
	Sig. (2-tailed)	.478	.270	.273
	N	28	28	28
Tch. Exp.	Pearson Correlation	-.339	.362	-.363
	Sig. (2-tailed)	.077	.058	.058
	N	28	28	28
Certification	Pearson Correlation	.010	-.123	.123
	Sig. (2-tailed)	.959	.532	.532
	N	28	28	28
Ed. Level	Pearson Correlation	-.145	.170	-.171
	Sig. (2-tailed)	.463	.386	.384
	N	28	28	28
Ethnicity	Pearson Correlation	.273	-.178	.178
	Sig. (2-tailed)	.159	.365	.366
	N	28	28	28
Gender	Pearson Correlation	-.033	.167	-.167
	Sig. (2-tailed)	.869	.396	.396
	N	28	28	28
I.P.D	Pearson Correlation	.410(*)	-.323	.327
	Sig. (2-tailed)	.030	.094	.089
	N	28	28	28
Class CZ	Pearson Correlation	-.253	.267	-.266
	Sig. (2-tailed)	.194	.170	.172
	N	28	28	28

Appendix C (continued)

		READ AV	READDNM	READ M/E
READ AV	Pearson Correlation	1	-.830(**)	.833(**)
	Sig. (2-tailed)		.000	.000
	N	28	28	28
READDNM	Pearson Correlation	-.830(**)	1	-1.000(**)
	Sig. (2-tailed)	.000		.000
	N	28	28	28
READ M/E	Pearson Correlation	.833(**)	-1.000(**)	1
	Sig. (2-tailed)	.000	.000	
	N	28	28	28
ELA AV	Pearson Correlation	.794(**)	-.629(**)	.633(**)
	Sig. (2-tailed)	.000	.000	.000
	N	28	28	28
ELA DNM	Pearson Correlation	-.682(**)	.581(**)	-.585(**)
	Sig. (2-tailed)	.000	.001	.001
	N	28	28	28
ELA M/E	Pearson Correlation	.680(**)	-.579(**)	.584(**)
	Sig. (2-tailed)	.000	.001	.001
	N	28	28	28
TeachEff	Pearson Correlation	-.506(**)	.363	-.364
	Sig. (2-tailed)	.006	.057	.057
	N	28	28	28
IPDPercep	Pearson Correlation	-.020	-.030	.034
	Sig. (2-tailed)	.919	.878	.865
	N	28	28	28

Appendix C (continued)

		READ AV	READDNM	READ M/E
GroupPD	Pearson Correlation	-.168	.214	-.213
	Sig. (2-tailed)	.394	.274	.277
	N	28	28	28
InterPersRel	Pearson Correlation	-.139	.174	-.172
	Sig. (2-tailed)	.482	.376	.383
	N	28	28	28
		ELA AV	ELA DNM	ELA M/E
Grade Lvl	Pearson Correlation	.265	-.345	.342
	Sig. (2-tailed)	.172	.072	.075
	N	28	28	28
Tch. Exp.	Pearson Correlation	-.336	.372	-.374(*)
	Sig. (2-tailed)	.080	.051	.050
	N	28	28	28
Certification	Pearson Correlation	-.043	-.110	.109
	Sig. (2-tailed)	.828	.577	.580
	N	28	28	28
Ed. Level	Pearson Correlation	-.155	.302	-.306
	Sig. (2-tailed)	.430	.118	.114
	N	28	28	28
Ethnicity	Pearson Correlation	.163	-.018	.017
	Sig. (2-tailed)	.407	.926	.932
	N	28	28	28

Appendix C (continued)

		ELA AV	ELA DNM	ELA M/E
Gender	Pearson Correlation	.037	.041	-.040
	Sig. (2-tailed)	.854	.835	.840
	N	28	28	28
I.P.D	Pearson Correlation	.622(**)	-.733(**)	.734(**)
	Sig. (2-tailed)	.000	.000	.000
	N	28	28	28
Class CZ	Pearson Correlation	-.059	.017	-.020
	Sig. (2-tailed)	.767	.933	.918
	N	28	28	28
READ AV	Pearson Correlation	.794(**)	-.682(**)	.680(**)
	Sig. (2-tailed)	.000	.000	.000
	N	28	28	28
READDNM	Pearson Correlation	-.629(**)	.581(**)	-.579(**)
	Sig. (2-tailed)	.000	.001	.001
	N	28	28	28
READ M/E	Pearson Correlation	.633(**)	-.585(**)	.584(**)
	Sig. (2-tailed)	.000	.001	.001
	N	28	28	28
ELA AV	Pearson Correlation	1	-.899(**)	.898(**)
	Sig. (2-tailed)		.000	.000
	N	28	28	28
ELA DNM	Pearson Correlation	-.899(**)	1	-1.000(**)
	Sig. (2-tailed)	.000		.000
	N	28	28	28

Appendix C (continued)

		ELA AV	ELA DNM	ELA M/E
ELA M/E	Pearson Correlation	.898(**)	-1.000(**)	1
	Sig. (2-tailed)	.000	.000	
	N	28	28	28
TeachEff	Pearson Correlation	-.404(*)	.309	-.309
	Sig. (2-tailed)	.033	.110	.109
	N	28	28	28
IPDPercep	Pearson Correlation	.064	-.125	.122
	Sig. (2-tailed)	.748	.525	.537
	N	28	28	28
GroupPD	Pearson Correlation	-.304	.200	-.202
	Sig. (2-tailed)	.116	.307	.304
	N	28	28	28
InterPersRel	Pearson Correlation	-.158	.116	-.119
	Sig. (2-tailed)	.423	.557	.548
	N	28	28	28

		Teacher Efficacy	IPD Perceptions	Group PD	Inter Pers Relat
Grade Lvl	Pearson Correlation	.043	.167	-.053	.237
	Sig. (2-tailed)	.827	.394	.788	.225
	N	28	28	28	28
Tch. Exp.	Pearson Correlation	.282	-.117	.073	-.102
	Sig. (2-tailed)	.147	.552	.712	.604
	N	28	28	28	28

Appendix C (continued)

		Teacher Efficacy	IPD Perceptions	Group PD	Inter Pers Relat
Certification	Pearson Correlation	.176	.180	.284	-.009
	Sig. (2-tailed)	.370	.359	.143	.964
	N	28	28	28	28
Ed. Level	Pearson Correlation	.276	-.059	-.167	-.142
	Sig. (2-tailed)	.155	.764	.395	.471
	N	28	28	28	28
Ethnicity	Pearson Correlation	-.085	.129	.261	.312
	Sig. (2-tailed)	.667	.513	.180	.106
	N	28	28	28	28
Gender	Pearson Correlation	.085	-.207	-.043	-.165
	Sig. (2-tailed)	.667	.290	.827	.402
	N	28	28	28	28
I.P.D	Pearson Correlation	.059	.230	-.064	.062
	Sig. (2-tailed)	.764	.240	.745	.755
	N	28	28	28	28
Class CZ	Pearson Correlation	.473(*)	.512(**)	.467(*)	.574(**)
	Sig. (2-tailed)	.011	.005	.012	.001
	N	28	28	28	28
READ AV	Pearson Correlation	-.506(**)	-.020	-.168	-.139
	Sig. (2-tailed)	.006	.919	.394	.482
	N	28	28	28	28

Appendix C (continued)

		Teacher Efficacy	IPD Perceptions	Group PD	Inter Pers Relat
READDNM	Pearson Correlation	.363	-.030	.214	.174
	Sig. (2-tailed)	.057	.878	.274	.376
	N	28	28	28	28
READ M/E	Pearson Correlation	-.364	.034	-.213	-.172
	Sig. (2-tailed)	.057	.865	.277	.383
	N	28	28	28	28
ELA AV	Pearson Correlation	-.404(*)	.064	-.304	-.158
	Sig. (2-tailed)	.033	.748	.116	.423
	N	28	28	28	28
ELA DNM	Pearson Correlation	.309	-.125	.200	.116
	Sig. (2-tailed)	.110	.525	.307	.557
	N	28	28	28	28
ELA M/E	Pearson Correlation	-.309	.122	-.202	-.119
	Sig. (2-tailed)	.109	.537	.304	.548
	N	28	28	28	28
TeachEff	Pearson Correlation	1	.414(*)	.510(**)	.372
	Sig. (2-tailed)		.029	.006	.051
	N	28	28	28	28
IPDPercep	Pearson Correlation	.414(*)	1	.585(**)	.582(**)
	Sig. (2-tailed)	.029		.001	.001
	N	28	28	28	28

Appendix C (continued)

		Teacher Efficacy	IPD Perceptions	Group PD	Inter Pers Relat
GroupPD	Pearson Correlation	.510(**)	.585(**)	1	.688(**)
	Sig. (2-tailed)	.006	.001		.000
	N	28	28	28	28
InterPersRel	Pearson Correlation	.372	.582(**)	.688(**)	1
	Sig. (2-tailed)	.051	.001	.000	
	N	28	28	28	28

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

APPENDIX D

High Definition Lesson Planning Format for Rating

Please rate the weekly lesson plan using the following scale:

Scale 1 = Not in line with Model, or Well Below Standard
Scale 2 = Needs Improvement
Scale 3 = Meets Standard
Scale 4 = Exceed Standard

	Lesson Planning	1	2	3	4
	A. Needs Assessment: Assesses performance in relation to causal variables				
1	Identifies variation in students' performance, or identifies number of students below expectation, meet expectation, etc. (NCATE-PSC)				
2	Identifies weak concept areas, etc. (NCATE-PSC)				
3	Identifies students who perform below expectation in relation to social causes (Gender, SES, other home factors) & examines relevance to teaching methods & materials used; learning styles and motivation, etc.				
	B. Objectives: Outcomes				
4	Stated to improve weak concept areas				
5	Stated to improve higher order thinking skills -Bloom's				
6	Stated in terms of helping low achievers to improve on outcomes				
	C. Content/Materials				
7	Contains/identifies basic knowledge in content				

Appendix D (continued)

	C. Content/Materials (continued)	1	2	3	4
8	Contains/identifies higher order thinking skills-Blooms in content				
9	Indicates/demonstrates facts ideas related to students' contextual experiences, learning level, learning styles, related knowledge, etc.				
	D. Methodology: Delivery-transaction process				
10	Specifies explanations and questions to convey lower order text meanings in relation to students' experiences				
11	Specifies explanations and questions to probe higher order thinking skills of text in relation to students' experiences				
12	Specifies explanations to show how students' answers will be utilized to re-construct textbook knowledge (Constructivism)				
	E. Formative evaluation for feedback in teaching process				
13	Specifies questions to assess performance on full range of Bloom's taxonomy & Dispositions as identified in objectives/tests				
14	Provides questions to assess performance on full range of Bloom's taxonomy if experiential and/or f hands-on or group work				
15	Provides questions to assess performance on full range of Bloom's taxonomy in relation to experiences simulated in use of technology				
	F. Summative Evaluation				
16	Multiple choice items, true-false items, or short sentence completion tests are constructed based on content as taught and measured on full range of Bloom's taxonomy & dispositions				

Appendix D (continued)

	F. Summative Evaluation (continued)	1	2	3	4
17	Essay, or project assignments are constructed to cover full range of the Bloom's taxonomy & dispositions as stated in objectives				
18	Results on assignments are utilized in needs assessment above				

APPENDIX E

Observation-Based Instructional Assessment (OBIA) System

Observation Based Instructional Assessment (OBIA) System: Observations of acts: 0 = None; 1 = 1-2; 2 = 3-4; 3 = 5-6; 4 = 7-8; 5 = 9 or more *An act* = is a complete statement with a meaning: Yes and no are complete statements with meanings. *Lower order skills*: Knowledge = Recall of facts, Comprehension = recalling, literal meanings, paraphrasing. *Higher order thinking skills*: Application, analysis, synthesis, inferences, moralizing, evaluation.

Excel, SPSS Code	Teacher Task Areas	Lower Order Thinking Skills: *Teacher*	Higher Order Thinking Skills: *Teacher*	Lower Order Thinking Skills	Higher Order Thinking Skills: *Student*
1-4	*A. Procedural Communication (standard VI)* Explains, Asks questions, uses answers by praising and elaborating, building	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
5-8	*B. Uses student s social experiences* 1. Explains process 2. Asks question 3. Uses Answers, praise as	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5
9-12	C. *Uses curriculum/ syllabus content*: explains asks questions and uses answers on the content 1. Explains content 2. Asks questions 3. Uses Answers, praises	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5
13-16	*D. Relates knowledge to previous lesson concepts* 1. Explains 2. Asks questions 3. Uses answers, praises	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5

Appendix E (continued)

Excel, SPSS Code	Teacher Task Areas	Lower Order Thinking Skills: *Teacher*	Higher Order Thinking Skills: *Teacher*	Lower Order Thinking Skills	Higher Order Thinking Skills: *Student*
17-20	*E. Relates concepts to different subject areas and readings* 1. Explains 2. Asks questions 3. Uses answers, praises	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5
21-24	F. Assesses *performance on concepts (Standard II Assessment)*: Uses questions to identify learning outcomes; Uses opinions to explore possible answers 1. Explains 2. Asks questions 3. Uses, answers, praises	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	0 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5
25-28	G. *Behavior Management (Positive)*: If Rejection, criticisms, etc (=0), If proximity, eye-contact, dialogue, praise, etc (=1-5)	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5

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